

MASS. EA40.2.M46/41

-WARE RIVER WATERSHED-

MDC/DWM PUBLIC ACCESS MANAGEMENT PLAN UPDATE



Aerial View of the Ware River Intake – C. Read, MDC/DWM

Updated Management Plan for Public Access within the MWRA-MDC/DWM Drinking Water Supply System's Ware River Watershed

Prepared by Metropolitan District Commission/Division of Watershed Management (MDC/DWM)
January 2000

Commonwealth of Massachusetts

Argeo Paul Cellucci, Governor

Executive Office of Environmental Affairs

Robert Durand, Secretary

Metropolitan District Commission

David B. Balfour, Jr., Commissioner

Samantha Overton Bussell, Deputy Commissioner

Joseph M. McGinn, Esq., Director,
Division of Watershed Management

MDC/DWM – Quabbin Section

Principal Authors:

William E. Pula, P.E., Superintendent

Lisa C. Gustavsen, AICP, Regional Planner II

MDC/DWM Public Access Working Group



¹ The MDC/DWM considers the Ware River watershed as the geographically defined area draining water to MWRA's diversion facility (a.k.a., R.H. Longeran Intake). The intake is located on the Ware River in Barre, Massachusetts. The Ware River watershed includes areas wholly or partially within the eight towns of Phillipston, Templeton, Hubbardston, Barre, Rutland, Oakham, Princeton, and Westminster, Massachusetts.

Abstract:

In Central Massachusetts, the Metropolitan District Commission Division of Watershed Management (MDC/DWM) manages nearly 23,000 acres of land and waters primarily for water quality protection, drinking water supply, and ecological purposes in the Ware River Watershed. Given these primary goals, the MDC/DWM Public Access Management Plan Update - Ware River Watershed explains the rationale of MDC/DWM policy and describes control measures used to mitigate impacts from public access in the watershed. This management plan includes twenty-seven updated policies for public access which are focused on common recreational activities that occur on MDC/DWM land and water resources in the Ware River watershed. The MDC/DWM has also incorporated new information related to enhanced protection of drinking water supplies into this updated plan. The primary sources of information used to develop this Plan and its updated policies include new federal and state legislation and regulations, review of scientific and professional literature, interagency review, advisory committee recommendations, public input, and field-staff recommendations. The MDC/DWM revisions to its previous access plan have clarified important information and bridged policy gaps which have been identified over the past ten years since the first Public Access Plan was developed. The MDC/DWM will begin implementation of the MDC/DWM Public Access Management Plan Update starting January 1, 2000. MDC/DWM will update the Plan as needed.

Citation:

Gustavsen, Lisa C., Pula, William E., et. al. 2000. MDC/DWM Public Access Management Plan Update - Ware River Watershed. Metropolitan District Commission Division of Watershed Management. Boston, MA. 227 pp.

Acknowledgements:

The following individuals and groups contributed significant time and effort in the development of the *MDC/DWM Public Access Management Plan Update - Ware River Watershed*:

Ware River Public Access Working Group (MDC/DWM staff):

Bob Bishop, Mark Brighanti, Steve Drawbridge, Herm Eck, John Gregoire (MWRA), Lisa Gustavsen, Matt Hopkinson, William Pula, Clif Read, Dave Small, Vinny Vignaly, and Dave Zaganiaz

Division Readers:

Patricia Austin, Tamara Crocker, Jeanne Zilligen, and Joel Zimmerman

Map Production:

Phillip Lamothe

Web Page Management:

Joel Zimmerman and Chuck Borstel

Advisory Committees and Subcommittees:

Ware River Watershed Advisory Committee (WRWAC)

Water Supply Citizens Advisory Committee (WSCAC)

Quabbin Watershed Advisory Committee (QWAC)

Interpretative Services:

Terry Campbell

INTERPRETATIVE SERVICES & THE QUABBIN VISITOR CENTER

Visitor information regarding the Quabbin Reservoir or Ware River watersheds is available from the Interpretative Services staff at the Quabbin Visitor Center, seven days a week from 9:00 am - 4:00 pm. The Quabbin Visitor Center is in the MDC/DWM Administration Building, off Route 9 in Belchertown, Massachusetts. Visitor information can also be obtained at the MDC/DWM's Ware River Field Office at (508) 882-3636. Additional copies of this plan are available by request from the Quabbin Visitor Center.

MDC/DWM WATERSHED RANGERS

The MDC/DWM Watershed Rangers conduct off-site community education coupled with patrols and surveillance of MDC/DWM lands and waters to minimize threats created by public access on water supply watershed lands and waters. For more information, contact the Watershed Rangers at (413) 323-0191.

MDC/DWM Public Access Management Plan Update - Ware River Watershed January 2000

Public Comments:

This Plan and related information can also be found on the MDC/DWM's Web Page at the following URL: www.magnet.state.ma.us/mdc/water.htm

The Division welcomes written public input regarding its management decisions and policies. Please submit written comments to the address listed below:

MDC/DWM Public Access Management Plan Update – Ware River Watershed

MDC/DWM

P.O. Box 628

Belchertown, MA 01007

Telephone: (413) 323-6921

Facsimile: (413) 784-1751

Contents

EXECUTIVE SUMMARY	I
1 INTRODUCTION	1-1
2 WARE RIVER WATERSHED ASSESSMENT – 1998	2-1
3 MDC/DWM PUBLIC ACCESS FACT SHEETS FOR THE WARE RIVER WATERSHED	3-1
DRIVING	3-7
SNOWMOBILING ON MDC/DWM DESIGNATED TRAILS	3-11
OPERATING ALL TERRAIN VEHICLES (ATV’S), DIRT BIKES, ETC.....	3-15
BICYCLING ON MDC/DWM DESIGNATED ROADS	3-16
BIRD WATCHING/NATURE STUDY.....	3-23
DAY HIKING, WALKING, AND SNOWSHOEING.....	3-24
CROSS-COUNTRY SKIING.....	3-25
HUNTING AND TRAPPING	3-26
ICE FISHING AND ICE SKATING.....	3-27
SHORE FISHING	3-28
FIRES AND COOKING	3-29
DOG WALKING (INCLUDES HUNTING WITH DOGS).....	3-30
HORSEBACK RIDING.....	3-32
MOTORIZED BOATING.....	3-39
NONMOTORIZED BOATING	3-41
SWIMMING AND WADING	3-42
PERSONAL WATERCRAFT	3-43
OVERNIGHT CAMPING.....	3-47
ORGANIZED SPORTS/FIELD SPORTS.....	3-48
PROGRAMS/ASSEMBLIES (E.G., WEDDINGS, ETC.)	3-49
FISHING DERBIES	3-50
TRAIL MARKING/ ADVERTISING	3-51
TRAIL CLEARING.....	3-52
POSSESSING ALCOHOLIC BEVERAGES	3-53
COLLECTING AND METAL DETECTING	3-54
TARGET SHOOTING	3-55
OTHER ACTIVITIES	3-56
4 GENERAL PUBLIC ACCESS OPERATIONS.....	4-1
5 PLAN IMPLEMENTATION.....	5-1
6 CONCLUSIONS.....	6-1
GLOSSARY OF TERMS.....	132
REFERENCES CITED	135
APPENDICES.....	140

List of Figures

Figure 1 - The location of the Ware River Watershed in Massachusetts.....	III
Figure 2 - MDC/DWM Ware River Watershed System Map (1999).....	V
Figure 3 - MDC/DWM owned lands in the Ware River Watershed (1999).....	1-1
Figure 4 - MDC/MWRA Water Supply System	1-5
Figure 5 – MDC/DWM Master Policy Statement, Public Access in the Ware River Watershed.....	1-8
Figure 6 – MDC/DWM Ware River Watershed System Map.....	1-13
Figure 7 - The MDC/DWM Quabbin Reservoir and Ware River Watersheds superimposed over the Chicopee River Basin, Massachusetts	2-5
Figure 8 - Aggregated Land Use / Land Cover Classifications within MDC/DWM Watersheds.....	2-9
Figure 9 - Population trends 1970-2010 in Ware River watershed communities	2-11
Figure 10 - MDC/DWM Watershed Ranger Patrol Zones - Ware River Watershed.....	2-23
Figure 11 - MDC/DWM Designated Vehicle Access Roads - Ware River Watershed.....	3-9
Figure 12 - MDC/DWM Designated Snowmobile Routes - Ware River Watershed.....	3-13
Figure 13 - MDC/DWM Designated Bicycle Routes - Ware River Watershed.....	3-19
Figure 14 - MDC/DWM Designated Horseback Riding Routes, Ware River Watershed.....	3-35
Figure 15 - MDC/DWM Roads, Gates, and Barways.....	4-3

List of Tables

Table 1 - Changes between MDC/DWM Public Access Policies, 1988 vs. 2000	IX
Table 2 - MDC/DWM Public Access Policy Summary, Ware River Watershed	X
Table 3 - MDC/DWM Public Access Policy Summary, Ware River Watershed	1-10
Table 4 - System Safe Yield Contributions from MDC/DWM Watersheds	2-7
Table 5 - General Land Cover and Land Use Estimates throughout MDC/DWM Watersheds (excluding Reservoir areas)	2-8
Table 6 - Select Average Water Quality Parameters Measured at Shaft #8, Ware River Intake (1994-1998)	2-13
Table 7 - MDC/DWM Public Access Policy Summary, Ware River Watershed	3-2
Table 8 - 1988 vs. 1999 MDC/DWM Designated Snowmobile Roads and Trails	3-12
Table 9 - 1988 vs. 1999 MDC/DWM Designated Horseback Riding Roads and Trails	3-34
Table 10 - Boat access ramps located on MDC/DWM lands in the Ware River, Off-Reservation Area	3-40
Table 11 - MDC/DWM Gate and Barway Operational Schedule Description	4-1
Table 12 - Generalized sign standards for MDC/DWM designated trail types	4-7
Table 13 - Generalized Activities for Plan Implementation.....	5-1

List of Acronyms Used

ACOE – US Army Corps of Engineers

ATV - All Terrain Vehicles

AWWA - American Water Works Association

CDC - Center for Disease Control

CMR - Code of Massachusetts Regulations

CVA - Chicopee Valley Aqueduct

DEP - Massachusetts Department of Environmental Protection

DPH – Massachusetts Department of Public Health

DFWELE - Department of Fisheries, Wildlife, and Environmental Law Enforcement
(a.k.a., MASSWILDLIFE)

DWM - Division of Watershed Management (a.k.a., MDC/DWM)

EOEA - Executive Office of Environmental Affairs

EPA - U.S. Environmental Protection Agency

GIS - Geographic Information Systems

GPS - Global Positioning System

IESWTR – Interim Enhanced Surface Water Treatment Rule (1996 SDWA)

MASSGIS- Massachusetts Geographic Information Systems

MDC/DWM - Metropolitan District Commission/Division of Watershed Management

MGD - Million Gallons Per Day

MGL - Massachusetts General Laws

MWRA - Massachusetts Water Resources Authority

ORMV - Off-road Motor Vehicle

ORW - Outstanding Resource Water

SWTR - Surface Water Treatment Rule

SDWA - Safe Drinking Water Act

US EPA - US Environmental Protection Agency

USGS - United States Geological Survey

WBDO - Waterborne Disease Outbreak

WPP - Watershed Protection Plan

WPPU - Watershed Protection Plan Update

WRWAC - Ware River Watershed Advisory Committee

MDC/DWM Public Access Management Plan Update - Ware River Watershed January 2000

Executive Summary

The Metropolitan District Commission Division of Watershed Management (MDC/DWM) is responsible for protecting the Metropolitan Boston drinking water supplies of the Quabbin and Wachusett Reservoirs. The Division's mission and water quality goals provide the basis for all of DWM's activities.

MDC/DWM's Mission:

The MDC/DWM's mission is derived primarily from its enabling legislation and subsequent amendments, found at M.G.L. Chapter 92 § 104 through 120. The statute directs the DWM to:

"... construct, maintain and operate a system of watersheds, reservoirs, water rights and rights in sources of water supply [to] supply thereby a sufficient supply of pure water to the Massachusetts Water Resources Authority, and [to] utilize and conserve said water and other natural resources to protect, preserve and enhance the environment of the Commonwealth and to assure the availability of pure water for future generations."

MDC/DWM's Water Quality Goals:

The MDC/DWM's six water quality goals for the Ware River watershed are as follows:

- ◆ To prevent waterborne disease from being introduced, spread, and contaminating source waters within the watershed;
- ◆ To maintain high quality source water throughout the watershed, particularly at the Ware River Intake;
- ◆ To meet the Safe Drinking Water standards related to the source water coliform criteria;
- ◆ To reduce and control nutrient inputs to waters in the Ware River watershed, particularly near the Ware River intake;
- ◆ To reduce the risk of chemical and hazardous material spills within the watershed; and
- ◆ To control general pollutant transport in the watershed contributing to the Ware River intake.

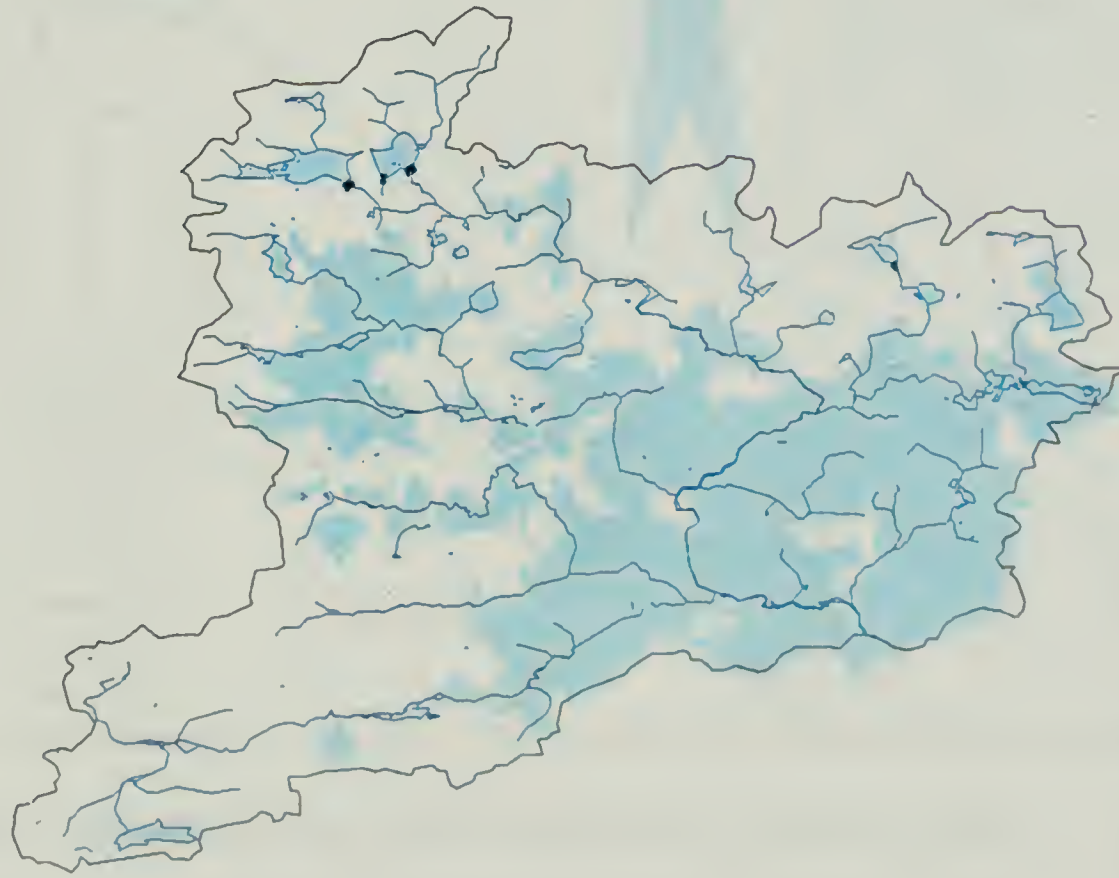
Watershed Protection Plans

In 1991, the MDC/DWM and MWRA prepared Watershed Protection Plans for the Wachusett Reservoir and Quabbin Reservoir/Ware River watersheds, respectively. These Plans were the first comprehensive plans ever written for management of these watersheds. In 1998 DWM updated the 1991 Wachusett Reservoir Watershed Protection Plan and in 2000 will complete the Quabbin/Ware River Watershed Protection Plan Update. The Plan updates reflect the shift of the water supply industry and federal drinking water regulations towards concern for microbial contaminants that can cause acute illness. Recreation is a potential source of contamination and was ranked as a moderate priority the updated Watershed Plans. MDC/DWM controls recreational use on its water supply lands through specific regulations and policies set forth in the Public Access Management Plans. MDC/DWM has developed Public Access plans for each of the four watersheds under its care and control.

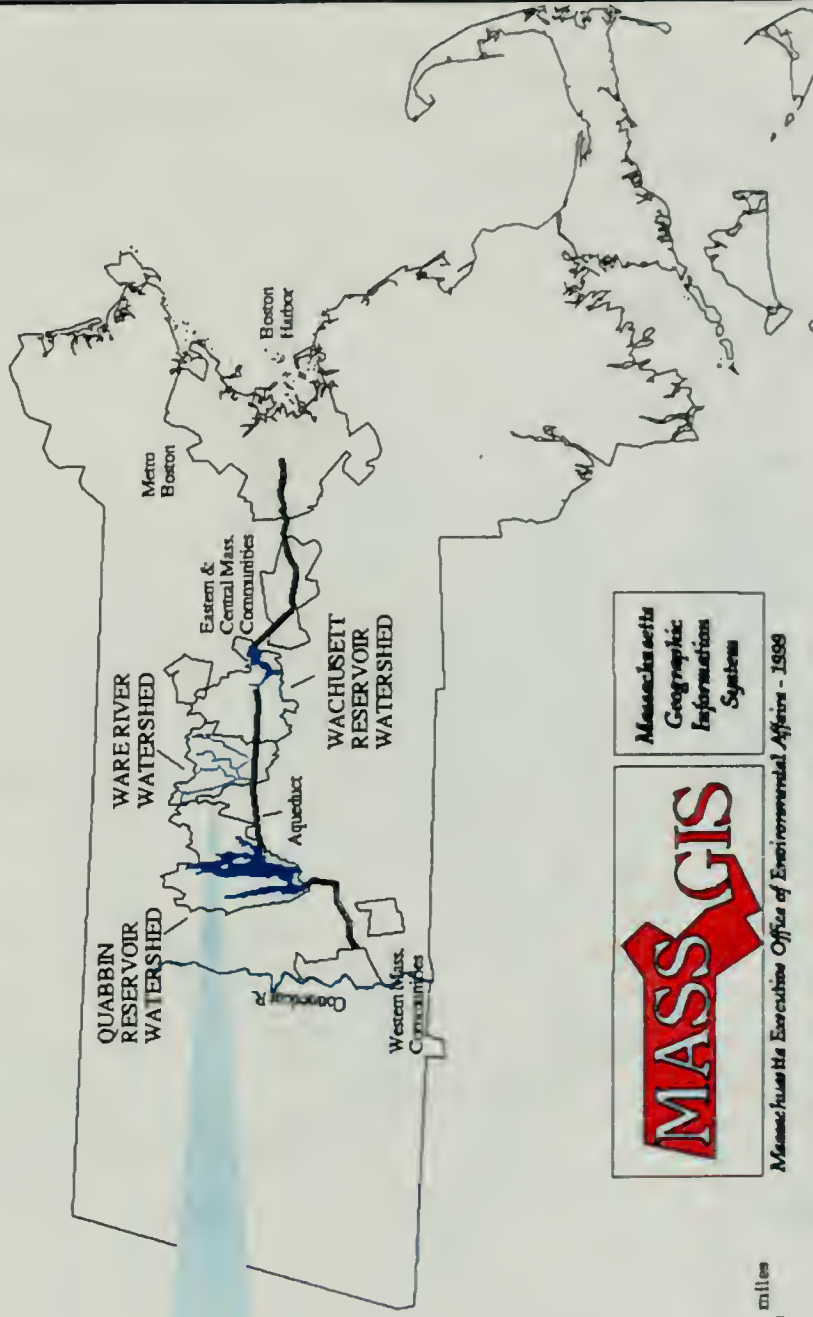
Ware River Watershed

The Ware River watershed is an important component of the MWRA/MDC Water System (see **Figure 1**). Located in Central Massachusetts between the Quabbin Reservoir and the Wachusett Reservoir, the Ware River watershed is the geographically defined area (approximately 62,000 acres) draining water to MWRA's diversion facility (a.k.a., R.H. Longenan Intake). The intake is located on the Ware River in Barre, Massachusetts. The Ware River watershed includes areas wholly or partially within the eight towns of Phillipston, Templeton, Hubbardston, Barre, Rutland, Oakham, Princeton, and Westminster, Massachusetts (see **Figure 2**).

WARE RIVER WATERSHED: A Section of the MDC/MWRA Water Supply System



MDC Land



Massachusetts Executive Office of Environmental Affairs - 1999



Map produced by Philip Lamothe, 1998

Figure 1 - The location of the Ware River Watershed in Massachusetts

Master Policy – Public Access Management

The MDC/DWM's Master Policy Statement regarding public access management guides the Division's policies found in the *Public Access Management Plan Update*. This Master Policy is comprised of six objectives:

- ◆ To protect drinking water resources from public access impacts;
- ◆ To preserve the apparent wilderness character within the watershed;
- ◆ To properly manage a public resource used as a source supply of drinking water;
- ◆ To protect historic and prehistoric sites within the watershed;
- ◆ To improve and protect long-term ecosystem health and biological diversity within the watershed; and
- ◆ To provide appropriate public access.

Purpose of a Public Access Management Plan

The purpose of the *Public Access Management Plan Update* is to use and incorporate the most current information available to guide and control public access so as to reduce the existing level of recreational impacts on drinking water supply lands managed by the MDC/DWM. The federal Safe Drinking Water Act and Amendments, state drinking water regulations, and the Metropolitan District Commission's Watershed Protection regulations require that public access on drinking water supply lands must be managed to minimize the risk of waterborne disease. These water supply lands are purchased and maintained through funding provided by Massachusetts Water Resources Authority ratepayers. The primary function of these water supply lands is to protect and provide high quality drinking water for current and future generations. The MDC/DWM's updated access plan details the Division's management rationale and explains which programs and activities are used to limit and control access to these lands and waters.

Why Update the Plan?

In 1992, the Massachusetts Department of Environmental Protection (DEP) issued MDC/DWM a waiver from filtration for drinking water distributed through the Chicopee Valley Aqueduct (CVA). DEP granted the waiver according to existing state and federal drinking water protection regulations. This waiver was based, in part, on the MDC/DWM's existing 1988 Access Plan which provided a framework for the control of public access. During DEP's 1999 inspection, under the current Consent Order from filtration for the Quabbin Reservoir's Chicopee Valley Aqueduct (waiver), DEP conducted a sanitary survey of the Quabbin Reservoir Watershed system, which includes the Ware River watershed. Of particular interest and concern to the Department was the allowance of increased activities on water supply lands that may have a detrimental impact to water quality. In addition, State regulations require the MDC/DWM to produce a management plan to control recreational use of watershed lands under the care and control of MDC/DWM. Currently, the MDC/DWM's top priority is to provide adequate protection for its surface water supplies from microbiological contamination. After nearly two years of research, public outreach, and regulatory review, the MDC/DWM has revised the 1988 plan and replaced it with the *MDC/DWM Public Access Management Plan Update – Ware River Watershed*. The new, updated plan guides and controls access on MDC/DWM managed water supply lands, ensures compliance with State and Federal laws, and helps educate visitors about the importance of water supply protection. This updated Plan is effective January 1, 2000. The MDC/DWM will continue to update its public access plans, as needed, in the future.

Purpose of this Update

This document represents an update of a portion of the 1988 *Quabbin and Ware River Watersheds Recreation and Public Access Policy and Plan*. The MDC/DWM staff developed this original Plan *MDC/DWM Public Access Management Plan Update - Ware River Watershed January 2000*

between 1986 - 1988 to strengthen the DWM's activities to better control public access on Division lands. The 1988 Plan contained public access policies for Division lands in both the Ware River watershed and Quabbin Reservoir watershed. In 1998, the MDC/DWM updated its Public Access Plan for the Quabbin Reservoir watershed system.

The 2000 Plan update applies only to MDC/DWM managed lands and waters in the Ware River watershed. All policies listed in this plan replace all existing MDC/DWM recreation and public access policies, interim guidelines, and maps, written before January 2000 regarding public access on Division controlled lands in the Ware River watershed.

Public Access Policies

The Plan contains twenty-seven fact sheets with the MDC/DWM's updated policies related to recreational activities conducted on MDC/DWM's lands and waters in the Ware River watershed. **Table 1** outlines the changes in the Division's updated public access policies for the Ware River Watershed between 1988 and 2000. **Table 2** summarizes the MDC/DWM's updated public access policies for the Ware River Watershed. **Figure 2** shows the areas referenced in Table 2 (e.g., MDC/DWM Reservation Land, Ware River Intake (Restricted Area), etc.).

Key Implementation Strategies found in the updated Plan:

The MDC/DWM staff will implement the policies, control measures, activities, and programs cited in this Plan beginning in January 2000. In general, Plan implementation strategies will include the following seven action steps list below. A more detailed implementation strategy is located in Chapter 5 of the Plan.

- ◆ Maintaining and improving structural access controls, as needed;
- ◆ Monitoring, referral (when necessary), and corrective actions;
- ◆ Maintaining and refining a tracking system and electronic database to document threats, corrective actions taken, and current status;
- ◆ Providing educational programs and opportunities to promote watershed protection;
- ◆ Conducting Plan evaluation and program/plan modification, as necessary.
- ◆ Partnering initiatives with the Ware River Watershed Advisory Committee (WRWAC), State Police, state agencies, and others; and
- ◆ Implementing new programs to focus on signage and sanitary facilities.

Table 1 - Changes between MDC/DWM Public Access Policies, 1988 vs. 2000

Access Activity	1988 MDC/DWM Policy	2000 MDC/DWM Policy
Driving	Allowed	Modified
Snowmobiling	Restricted	Modified
Operating ATV's	Prohibited	No Change
Bicycling	Not addressed	Added
Bird Watching/Nature Study	Not addressed	Added
Hiking/Walking/Snow-shoeing	Allowed	No Change
Cross-country Skiing	Not addressed	Added
Hunting & Trapping	Allowed	Modified
Ice Fishing/Ice Skating	Allowed on Reservation	Modified
Shore Fishing	Not addressed	Added
Fires & Cooking	Prohibited	No Change
Dog Walking	Allowed	Modified
Horseback Riding	Allowed on designated trails	Modified
Boating (motorized)	Allowed with limited horsepower	Modified
Boating (non-motorized)	Allowed	No Change
Swimming/Wading	Restricted with 2 exceptions	No Change
Operating PWC	Prohibited	No Change
Overnight Camping	Not addressed	Added
Organized Sports	Not addressed	Added
Programs/Assemblies	Not addressed	Added
Fishing Derbies	Not addressed	Added
Trail Marking	Not addressed	Added
Trail Clearing	Not addressed	Added
Possessing Alcoholic Beverages	Prohibited	No Change
Collecting/Metal Detecting	Prohibited	No Change
Target Shooting	Prohibited	No Change
Other	Not addressed	Modified

Table 2 - MDC/DWM Public Access Policy Summary, Ware River Watershed

MDC/DWM PUBLIC ACCESS POLICY SUMMARY WARE RIVER WATERSHED			
Activity	Ware River Reservation	Ware River Off-Reservation	Ware River Intake
VEHICLE ACCESS			
Motorized			
Driving - vehicles registered for public roadways	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="radio"/>
Snowmobiling - MDC/DWM Designated trails only	<input type="checkbox"/> 2	<input type="checkbox"/> 2	<input type="radio"/>
Operating ATVs - dirt bikes, ORVs, etc.	<input type="radio"/> 3	<input type="radio"/> 3	<input type="radio"/> 3
Non-Motorized			
Bicycling – MDC/DWM Designated roads & trails only	<input type="checkbox"/> 4	<input type="checkbox"/> 4	<input type="radio"/>
FOOT ACCESS			
Bird Watching/Nature Study	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
Hiking/Walking/Snow-shoeing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
Cross-country Skiing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
Hunting & Trapping	<input type="checkbox"/> 5	<input type="checkbox"/> 5	<input type="radio"/>
Ice Fishing/Ice Skating	<input type="checkbox"/> 6	<input type="checkbox"/> 6	<input type="radio"/>
Shore Fishing	<input type="checkbox"/> 6	<input type="checkbox"/> 6	<input type="radio"/>
Fires & Cooking – includes gas grills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dog Walking – includes hunting with dogs	<input type="checkbox"/> 13	<input type="checkbox"/> 13	<input type="radio"/>
Horseback Riding – MDC/DWM Designated trails	<input type="checkbox"/> 14	<input type="checkbox"/> 14	<input type="radio"/>
WATER ACCESS			
Boating (motorized)	<input type="radio"/> 7	<input type="checkbox"/> 8	<input type="radio"/>
Boating (non-motorized)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
Swimming/Wading	<input type="checkbox"/> 9	<input type="checkbox"/> 10	<input type="radio"/>
Operating PWC (personal watercraft are jet skiis)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
OTHER ACTIVITIES			
Overnight Camping	<input type="radio"/>	<input type="checkbox"/> 15	<input type="radio"/>
Organized Sports	<input type="checkbox"/> 11	<input type="checkbox"/> 11	<input type="radio"/>
Programs/Assemblies	<input type="checkbox"/> 12	<input type="checkbox"/> 12	<input type="radio"/>
Fishing Derbies	<input type="checkbox"/> 11	<input type="checkbox"/> 11	<input type="radio"/>
Trail Marking/Advertising	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Trail Clearing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Possessing Alcoholic Beverages	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Collecting/Metal Detecting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Target Shooting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	CHECK WITH MDC/DWM VISITOR CENTER		
LEGEND: <input type="radio"/> Prohibited; <input type="checkbox"/> Allowed with general restrictions (below); <input type="checkbox"/> # Allowed with specific restrictions			

☐ General public access on MDC/DWM lands is allowed through gates/barways in designated areas only. Any activity which injures or defaces the property of the Commonwealth is strictly prohibited. Night access is allowed on MDC/DWM lands in the Ware River Watershed. These policies are based on MDC regulations.

MDC/DWM Public Access Policy Summary Continued	
Specific Restrictions for Public Access on MDC/DWM Lands in the Ware River Watershed	
<input type="checkbox"/> 1	Registered motorized vehicles are those registered for operation on public ways. Their access is restricted to certain maintained MDC roads at open gates. Motorized vehicles are prohibited on MDC roads beyond closed gates or barways.
<input type="checkbox"/> 2	Snowmobiles are allowed with specific restrictions on MDC/DWM designated snowmobile trails only. Restrictions include season, snow depth, mph, etc.. MDC/DWM Designated Snowmobile Trail Map is available from the Quabbin Visitor Center, Ware River Field Office or MDC/DWM web site.
<input type="checkbox"/> 3	The operation of all-terrain vehicles is prohibited on MDC/DWM lands and roads.
<input type="checkbox"/> 4	Bicycling is allowed on MDC/DWM designated bicycle roads and trails and public roadways. Off-road bicycling and off-road trail riding is prohibited. Bicycling is prohibited during mud season when MDC/DWM roads and trails are closed by gates or signs. MDC/DWM Designated Bicycle Trail Map is available from the Quabbin Visitor Center, Ware River Field Office or on our web site listed below.
<input type="checkbox"/> 5	Hunting is allowed with a valid Massachusetts hunting license according to State regulations. State regulations prohibit hunting on Sundays.
<input type="checkbox"/> 6	Fishing access is allowed with a valid Massachusetts fishing license according to State regulations.
<input type="checkbox"/> 7	Motorboat use within waters of the Ware River Reservation (e.g., Whitehall Pond) is prohibited.
<input type="checkbox"/> 8	Motorboat access from MDC/DWM lands in the Ware River Off-Reservation is allowed with these restrictions. <ul style="list-style-type: none"> ➤ Motorboat access facilities (ramps) are provided only on MDC/DWM lands at the following locations: Brigham Pond, Demond Pond, Comet Pond, and Long Pond. ➤ Boat motor size off MDC/DWM ramps is limited to 20 hp(2 stroke) and 25 hp (4 stroke). ➤ MDC/DWM annually issues a limited number of <i>MDC/DWM Long Pond Access Permits</i> for boats with motors greater than 20 hp. This permit allows the holder to use a 20+ hp motor on Long Pond from Memorial Day to the last day in September and between 10 AM and 6 PM. Contact the Quabbin Visitor Center for more information.
<input type="checkbox"/> 9	Limited swimming access is allowed within a designated area of Rutland State Park, a DEM managed facility. See posted restrictions.
<input type="checkbox"/> 10	Limited swimming access is allowed in a designated area on Comet Pond, according to posted restrictions and during the designated season.
<input type="checkbox"/> 11	These activities are allowed only by written permission from the Superintendent, Quabbin Section
<input type="checkbox"/> 12	Groups up to 25 individuals are asked to notify the MDC/DWM prior to access on MDC/DWM lands. Groups exceeding more than 25 individuals or 15 horseback riders with horse (in the Ware River Watershed only), are required to submit a MDC/DWM Group Access Permit application at least 3 weeks prior to planned access. Contact Quabbin Visitor Center, Ware River Field Office, or MDC/DWM's web site for an access permit application
<input type="checkbox"/> 13	The MDC/DWM requests visitors to pickup and properly dispose of any fecal waste within 100' of a tributary or surface waters
<input type="checkbox"/> 14	Horseback riding access is allowed on MDC/DWM Designated Horseback Riding Roads and Trails only in the Ware River Watershed and according to specific restrictions (e.g., no riding during mud season, permit required for group rides of 15 or more, no watering of horses in tributaries, etc.) See Fact Sheet. MDC/DWM Designated Horseback Riding Roads and Trails Map is available from the Quabbin Visitor Center, Ware River Field Office and MDC/DWM web site.
<input type="checkbox"/> 15	Camping includes the use of tents, trailers, lean-tos, and motor homes. Camping access is prohibited with the Ware River Reservation. Limited camping on MDC/DWM Off-Reservation is allowed with written permission from the Superintendent only. Contact the Ware River Field office for more information (508) 882-3636
Contact information:	
<ul style="list-style-type: none"> ➤ Quabbin Visitor Center – Visit the Center at the Winsor Dam in Belchertown open 9-4:30 daily. (413) 323-7221 ➤ Ware River Field Office – Contact the MDC/DWM field staff at (508) 882-3636 ➤ MDC/DWM Watershed Rangers – Contact the Watershed Rangers at (413) 323-0191 ➤ Massachusetts State Police – Report violations/emergencies to the State Police at (413) 323-7561 (*SP) ➤ See MDC/DWM's Home Page – www.magnet.state.ma.us/mdc/water.htm 	

1 Introduction

1.1 Background

The *MDC/DWM Public Access Management Plan Update - Ware River Watershed* completes the Metropolitan District Commission Division of Watershed Management's revision and update of the *Quabbin and Ware River Watersheds Recreation and Public Access Policy and Plan* (O'Connor, 1988). This Plan Update along with the *1998 MDC Public Access Plan - Quabbin Reservoir Watershed System* completely replaces 1988 Plan and any amendments made to it.

The Division has updated the 2000 Plan in order to:

- enhance existing pathogen prevention strategies;
- comply with drinking water protection regulations;
- improve intra-agency coordination;
- reflect the best available information in public health protection, and
- promote greater compliance with access rules, regulations, and policies by the public.

This plan contains six chapters, followed by a glossary, references, and appendices. The primary purpose of this Plan is to guide and control the public's access and use of drinking water supply lands and waters managed by the MDC/DWM in the Ware River watershed (see **Figure 3**). The MDC/DWM owns approximately 23,000 acres in the Ware River Watershed. The entire watershed area is approximately 62,000 acres.

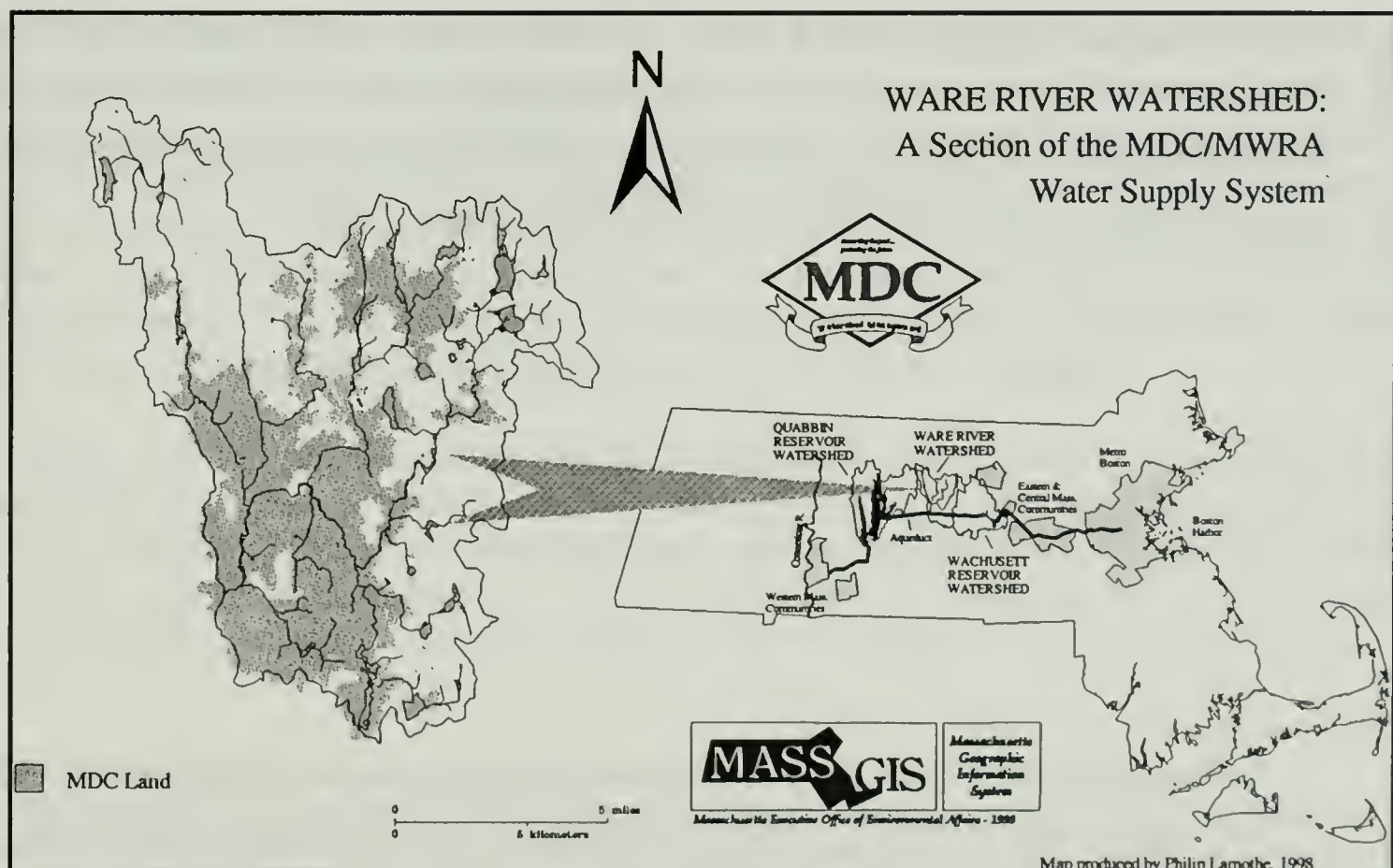


Figure 3 - MDC/DWM owned lands in the Ware River Watershed (1999)

1.2 Metropolitan District Commission/Division of Watershed Management (MDC/DWM)

Since 1919, the Metropolitan District Commission (MDC), a state agency within the Massachusetts Executive Office of Environmental Affairs (EOEA), has functioned to protect metropolitan Boston's drinking water supply in accordance with M.G.L. Chapter 350 of the Acts of 1919 § 123. In 1984, the Massachusetts legislature, under M.G.L. Chapter 372 of the Acts of 1984, divided the former MDC Water Division into the MDC Division of Watershed Management and the Waterworks Division of the Massachusetts Water Resources Authority (MWRA). The MDC/DWM became responsible for reservoir watershed operation and management to supply a safe and sufficient supply of water to the MWRA. The MWRA became responsible for the distribution, transmission, and treatment of this water. Since that time, MDC/DWM has functioned as a single-purpose unit responsible for the collection and safe storage of drinking water. The MDC/DWM protects the reservoir water quality by managing and controlling activities occurring within lands and waters in the respective watersheds. Together, MDC/DWM and the MWRA provide drinking water to more than 2.5 million residents in forty-seven communities, local industries, as well as to millions of commuters and tourists in the metropolitan Boston area¹ (MWRA, 1999).

The MDC/DWM's mission is directed by legislation to:

“...construct, maintain and operate a system of watersheds, reservoirs, water rights and rights in sources of water supply [to] supply thereby a sufficient supply of pure water to the Massachusetts Water Resources Authority, and [to] utilize and conserve said water and other natural resources to protect, preserve, and enhance the environment of the Commonwealth and to assure the availability of pure water for future generations.” (M.G.L. ch. 92 § 104 through 120)

¹Three communities west of the Quabbin Reservoir obtain their water directly from the Quabbin Reservoir through the Chicopee Valley Aqueduct (serving approximately 80,000 consumers). In addition, the Town of Clinton draws water directly from the Wachusett Reservoir, independent of the MWRA transmission and treatment system. Two communities near the Wachusett Reservoir, Worcester and Leominster, may also withdraw water from the system for emergency supply.

Building on this legislatively defined mission, DWM's current responsibilities include:

- Maintenance and operation of the source facilities (including dams) safely and efficiently.
- Preservation and enhancement of the water quality of the supply sources, using education, enforcement, and cooperation to meet State and Federal water quality standards, and protect public health.
- Watershed management activities associated with surface water protection.
- Regulatory compliance with specific directives of the Legislature, such as the protection of the water supply sources, consideration of recreation opportunities, and enforcing rules and regulations for MDC/DWM lands and water resources.
- Public outreach and education to involve watershed towns, residents, and the public to increase stewardship of the water resources under the DWM's care and control (MDC/DWM, 1998).

MDC/DWM staff concentrates on the management, operation, and maintenance of the MWRA/MDC water supply system watersheds, reservoirs, dams, and dikes. Division staff includes professional engineers, analysts, attorneys, certified planners, watershed rangers, certified foresters, naturalists, bacteriologists, geographic information specialists, wildlife biologists, landscape architects, and a diverse support staff with a variety of skills and training. Division staff carry out a variety of specific watershed protection programs, provide public outreach and environmental education to watershed communities and visitors, and administer and enforce specific watershed protection regulations (350 CMR 11.00). MDC/DWM's staff activities are guided, integrated, and prioritized by *the MDC/DWM Watershed Protection Plans and Updates* (MDC/DWM, 1991, 1998, and 2000). MDC/DWM's public access management within land owned by or on waters controlled by the Division is an important element of the MDC/DWM's comprehensive Watershed Protection Program.

1.3 MDC/DWM-MWRA Drinking Water Supply System

Figure 4 is a system diagram of the MDC/DWM-MWRA Drinking Water Supply System. This system consists of four watershed areas, two terminal water reservoirs, and a series of intakes and aqueducts. Engineers designed the system to collect, store, and transport water from the Quabbin Reservoir's watershed to metropolitan Boston and three communities in central Massachusetts. The Ware River watershed is one of three active watershed areas of the supply system. The Ware River watershed is located to the east of the Quabbin reservoir watershed and to the west of the Wachusett Reservoir watershed. The Sudbury Reservoir watershed is an emergency backup reservoir, and thus not in the same drinking water class designation as the three active watersheds.

Due to an ingenious design, the gravity aqueduct system can transport water in opposite directions between the Quabbin Reservoir and Wachusett Reservoir (Dore, 1941). Using the Quabbin Aqueduct the MDC/DWM and MWRA staff can either transfer water from the Ware River to the Quabbin Reservoir or to the Wachusett Reservoir. Most typically, water is seasonally² transported from the Ware River intake through the Quabbin Aqueduct (a.k.a., "Quabbin Tunnel") to the Quabbin Reservoir.

Once the water is stored in the Quabbin Reservoir, it leaves by four controlled routes:

- through the twenty-five mile long Quabbin aqueduct to the Wachusett Reservoir;
- through the Chicopee Valley Aqueduct (CVA) to three communities in the Chicopee Valley

² Water can be legally diverted from the Ware River between October and June.

(Chicopee, Wilbraham, and South Hadley Fire District #1);

- through daily releases of approximately twenty million gallons of water at the Winsor Dam (to maintain stream flows and ecosystem health in and around the Swift River); and
- through releases over the spillway.

Besides these four controlled pathways, Quabbin Reservoir's water is also dispersed naturally through transpiration, evaporation, and groundwater flow.

Water leaving the MDC/DWM managed Quabbin Reservoir or Wachusett Reservoir will travel through an elaborate distribution system managed by the MWRA. This distribution system is a network composed of tunnels, aqueducts, and pipes that extend over four hundred miles in length to deliver water to the forty-seven community water supply systems managed by the MWRA.

The MDC/DWM-MWRA Water Supply system provides very high quality water, although the quality of water at the faucet depends greatly on the pipes in the local system). The MA Department of Public Health (DPH) has reported that no waterborne disease outbreaks have been attributed to source water contamination in this supply. Additional information related to the Water Supply System can be found on the MWRA's webpage at www.mwra.com

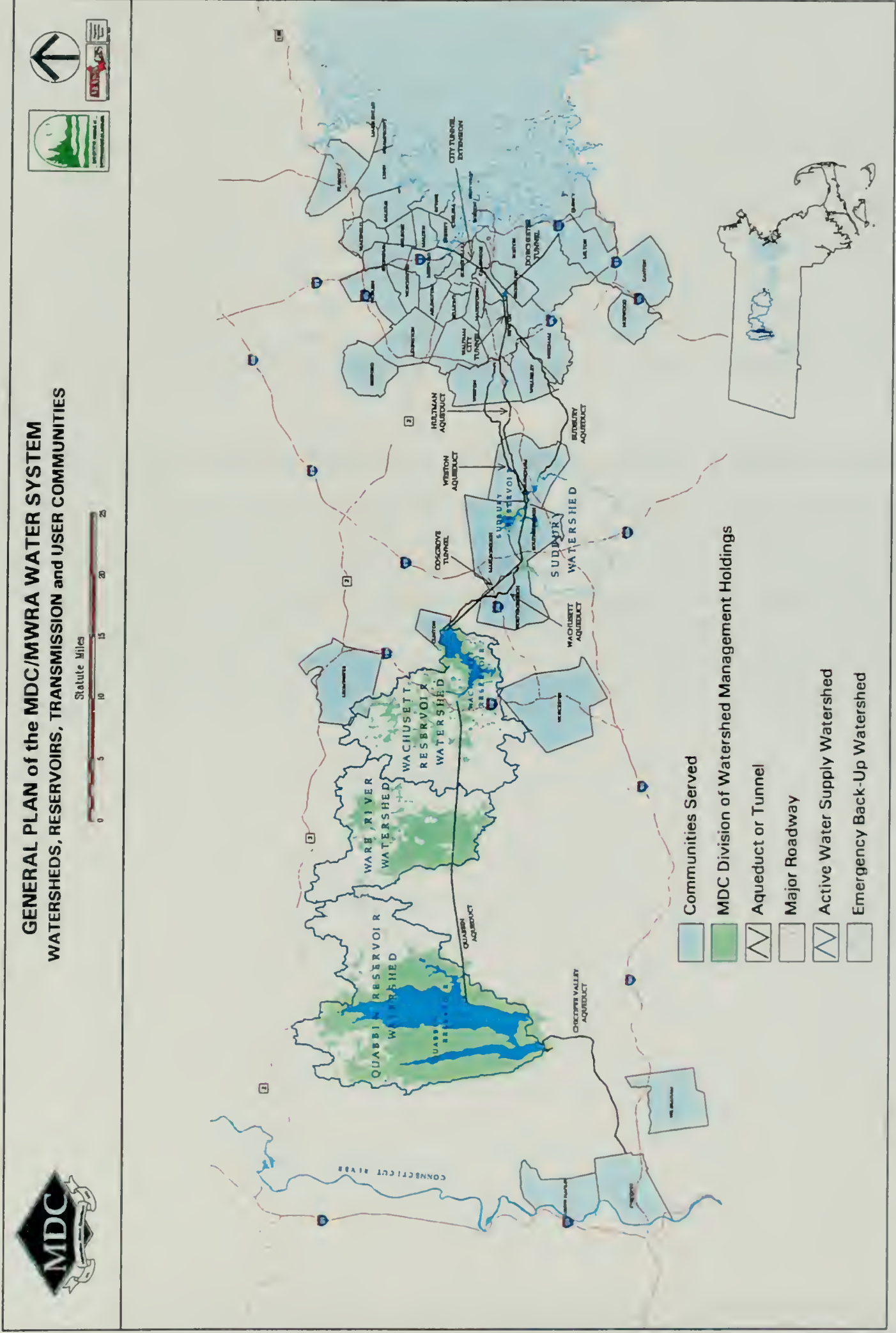


Figure 4 - MDC/MWRA Water Supply System

1.4 MDC/DWM Public Access Management Plan Goals

MDC/DWM has found public access³ management of public drinking water supply lands and waters is a complex and controversial topic. Not only do the issues involve water supply managers complying with regulations, but also drinking water consumers who pay for watershed protection through water bills. Private landowners with expectations living next to water supply lands may be positively or negatively affected by public access management decisions (Bureau of Land Management, 1991,1993,1998). Often formal and informal recreational groups who have been restricted in the watershed areas may be affected. Other interested parties include a variety of water supply advisory committees, the actual water supply watershed communities, and countless individual stakeholders. Consequently, the constraints and desires related to public access on drinking water supply land are multi-dimensional and value laden. Given this dynamic context, MDC/DWM's plan update provided the opportunity to gather information and synthesize this data into reasonable public access policies. Public input was considered wherever possible while developing these management policies. **Table 3** summarizes these policies to guide and control access onto drinking water supply lands managed by the MDC/DWM within the Ware River watershed.

1.5 MDC/DWM Master Policy Statement – Public Access

Over the past ten years, Division staff has observed a steady increase in the number and extent of recreational activities on drinking water supply watershed lands. They have observed that it is extremely difficult to control recreational activity once it has become established, even when new scientific research supports its prohibition for the purpose of public health protection (NEWWA, 1995) (AWWA, 1987). For this reason, the MDC/DWM's public access policies will purposely remain conservative. The MDC/DWM's Master Policy Statement modifies the statement used in the 1998 Access Plan for the Quabbin Reservoir Watershed system (see **Figure 5**).

³Overall, public access, in the Division's management context, is a wide-ranging and ever changing concept. It includes concepts on: the physical ability to enter and use land for recreational activities; the legal restrictions or prohibitions related to access or specific land or water-based recreational activities; sign placement; mapping; user education; intergovernmental coordination; public safety; and protection of public and private property rights.

Figure 5 – MDC/DWM Master Policy Statement, Public Access in the Ware River Watershed

MDC/DWM Master Policy Statement
Public Access in the Ware River Watershed

The Metropolitan District Commission Division of Watershed Management manages public access and recreation on MDC/DWM lands in the Ware River watershed to

- maximize water quality protection,
- minimize public health risks, and
- protect, conserve, and enhance the natural and cultural resources of the Commonwealth, by limiting and controlling public access and recreation occurring on these drinking water supply lands.

This access policy is consistent with Chapter 737 of the Massachusetts Acts of 1972 (a.k.a., “the Kelly-Wetmore Act”), Chapter 372 of the Massachusetts Acts of 1984 (a.k.a., “DWM Enabling Act”), State Drinking Water regulations (310 CMR 22.00), and Massachusetts Watershed Protection regulations (350 CMR 11.00). Except for those activities specifically authorized by statute or existing MDC/DWM regulations, MDC/DWM will permit new or expanded public access or recreational activity only when it does not conflict with MDC/DWM’s on going watershed protection and management activities, and the following objectives, values, attitudes, and desires:

- ◆ public drinking water supply protection
- ◆ apparent wilderness character stewardship
- ◆ natural resource management
- ◆ historic and prehistoric site preservation
- ◆ long-term ecosystem health improvement/biological diversity

The MDC/DWM will periodically evaluate, and modify accordingly, current recreational activities, whether authorized by statute, regulations, or policy. MDC/DWM’s assessment will determine if the type and intensity of these activities conflict with the above values or with other uses. If the Division identifies conflicts, it will act to eliminate or reduce the conflicts.

1.6 General Policies for Public Access Within MDC/DWM Lands

MDC/DWM has sole authority to restrict activities that may cause a threat to water quality protection. According to the MDC/DWM's general rules and regulations (350 CMR 11.09), the MDC/DWM manages public access and recreation by prohibitions or restrictions depending on time and/or location. MDC/DWM allows general public access on MDC/DWM owned lands in the Ware River Watershed System. Authorized access is through MDC/DWM gates and in MDC/DWM designated areas only. MDC/DWM allows night access in the Ware River watershed except within the area of the Ware River Intake (MDC/DWM Restricted Area), where access is prohibited at all times. Public access on water supply lands for commercial activities is strictly prohibited.

1.7 Specific Policies for Public Access Within MDC/DWM Managed Lands

MDC/DWM controls public access to MDC/DWM lands in the Ware River watershed using both general and specific MDC/DWM Public Access policies. The specific policies depend on the type of activity (See Chapter 3). MDC/DWM limits or restricts most recreational activities by location, season, or with conditions. MDC/DWM has summarized its specific policies related to public access on Division owned land in the Ware River watershed (see **Table 3**). Division staff use this two-page summary and accompanying watershed map to help educate visitors and guide the general public regarding their access requests.

MDC/DWM Public Access Policy Summary for the Ware River Watershed

MDC/DWM has updated its policies for public access and recreation activities allowed with restrictions within the Ware River watershed. The summary also itemizes prohibited activities within MDC/DWM owned lands. The policies are arranged by activity and classified by three MDC/DWM management areas in the Ware River Watershed: 1.) Ware River Intake (MDC/DWM Restricted Area); 2.) Ware River Watershed Reservation; and 3.) Ware River Off-Reservation lands (see **Table 3** and **Figure 6**). For greater detail, please see the Public Access Fact Sheet for each activity listed in Table 3 and Chapter 3 of this Plan.

In this summary, the Division has classified public access and recreational activities as either allowed with restrictions or prohibited on MDC/DWM's drinking water supply lands in the Ware River watershed. All authorized activities, unless otherwise indicated, have both specific and, where applicable, general policies. MDC/DWM's general public access policy includes access controls through designated points of entry (e.g., through MDC/DWM gates) and authorized access hours. In addition, MDC/DWM's general access policy prohibits public access to specifically restricted areas (e.g., Ware River intake). Usually, MDC/DWM allows recreational activities with specific restrictions that limit access to designated areas or times. In some cases, MDC/DWM requires a special MDC/DWM access permit (e.g., for activities conducted by groups of 25 individuals or more).

Table 3 - MDC/DWM Public Access Policy Summary, Ware River Watershed

MDC/DWM Public Access Policy Summary - Ware River Watershed			
Activity	Ware River Reservation	Ware River Off-Reservation	Ware River Intake
VEHICLE ACCESS			
Motorized			
Driving - vehicles registered for public roadways	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="radio"/>
Snowmobiling - MDC/DWM Designated trails only	<input type="checkbox"/> 2	<input type="checkbox"/> 2	<input type="radio"/>
Operating ATVs - dirt bikes, ORVs, etc.	<input type="radio"/> 3	<input type="radio"/> 3	<input type="radio"/> 3
Non-Motorized			
Bicycling – MDC/DWM Designated roads & trails only	<input type="checkbox"/> 4	<input type="checkbox"/> 4	<input type="radio"/>
FOOT ACCESS			
Bird Watching/Nature Study	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
Hiking/Walking/Snow-shoeing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
Cross-country Skiing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
Hunting & Trapping	<input type="checkbox"/> 5	<input type="checkbox"/> 5	<input type="radio"/>
Ice Fishing/Ice Skating	<input type="checkbox"/> 6	<input type="checkbox"/> 6	<input type="radio"/>
Shore Fishing	<input type="checkbox"/> 6	<input type="checkbox"/> 6	<input type="radio"/>
Fires & Cooking – includes gas grills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dog Walking – includes hunting with dogs	<input type="checkbox"/> 13	<input type="checkbox"/> 13	<input type="radio"/>
Horseback Riding – MDC/DWM Designated trails	<input type="checkbox"/> 14	<input type="checkbox"/> 14	<input type="radio"/>
WATER ACCESS			
Boating (motorized)	<input type="radio"/> 7	<input type="checkbox"/> 8	<input type="radio"/>
Boating (non-motorized)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
Swimming/Wading	<input type="checkbox"/> 9	<input type="checkbox"/> 10	<input type="radio"/>
Operating PWC (personal watercraft are jet skiis)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
OTHER ACTIVITIES			
Overnight Camping	<input type="radio"/>	<input type="checkbox"/> 15	<input type="radio"/>
Organized Sports	<input type="checkbox"/> 11	<input type="checkbox"/> 11	<input type="radio"/>
Programs/Assemblies	<input type="checkbox"/> 12	<input type="checkbox"/> 12	<input type="radio"/>
Fishing Derbies	<input type="checkbox"/> 11	<input type="checkbox"/> 11	<input type="radio"/>
Trail Marking/Advertising	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Trail Clearing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Possessing Alcoholic Beverages	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Collecting/Metal Detecting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Target Shooting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	CHECK WITH MDC/DWM VISITOR CENTER		
LEGEND: <input type="radio"/> Prohibited; <input type="checkbox"/> Allowed with general restrictions (below); <input type="checkbox"/> # Allowed with specific restrictions			
PG 1 of 2			

☐ General public access on MDC/DWM lands is allowed through gates/barways in designated areas only. Any activity which injures or defaces the property of the Commonwealth is strictly prohibited. Night access is allowed on MDC/DWM lands in the Ware River Watershed. These policies are based on MDC regulations.

MDC/DWM Public Access Policy Summary Continued	
Specific Restrictions for Public Access on MDC/DWM Lands in the Ware River Watershed	
<input type="checkbox"/> 1	Registered motorized vehicles are those registered for operation on public ways. Their access is restricted to certain maintained MDC roads at open gates. Motorized vehicles are prohibited on MDC roads beyond closed gates or barways.
<input type="checkbox"/> 2	Snowmobiles are allowed with specific restrictions on MDC/DWM designated snowmobile trails only. Restrictions include season, snow depth, mph, etc.. MDC/DWM Designated Snowmobile Trail Map is available from the Quabbin Visitor Center, Ware River Field Office or MDC/DWM web site.
<input type="checkbox"/> 3	The operation of all-terrain vehicles is prohibited on MDC/DWM lands and roads.
<input type="checkbox"/> 4	Bicycling is allowed on MDC/DWM designated bicycle roads and trails and public roadways. Off-road bicycling and off-road trail riding is prohibited. Bicycling is prohibited during mud season when MDC/DWM roads and trails are closed by gates or signs. MDC/DWM Designated Bicycle Trail Map is available from the Quabbin Visitor Center, Ware River Field Office or on our web site listed below.
<input type="checkbox"/> 5	Hunting is allowed with a valid Massachusetts hunting license according to State regulations. State regulations prohibit hunting on Sundays.
<input type="checkbox"/> 6	Fishing access is allowed with a valid Massachusetts fishing license according to State regulations.
<input type="checkbox"/> 7	Motorboat use within waters of the Ware River Reservation (e.g., Whitehall Pond) is prohibited.
<input type="checkbox"/> 8	Motorboat access from MDC/DWM lands in the Ware River Off-Reservation is allowed with these restrictions. <ul style="list-style-type: none"> ➤ Motorboat access facilities (ramps) are provided only on MDC/DWM lands at the following locations: Brigham Pond, Demond Pond, Comet Pond, and Long Pond. ➤ Boat motor size off MDC/DWM ramps is limited to 20 hp(2 stroke) and 25 hp (4 stroke). ➤ MDC/DWM annually issues a limited number of <i>MDC/DWM Long Pond Access Permits</i> for boats with motors greater than 20 hp. This permit allows the holder to use a 20+ hp motor on Long Pond from Memorial Day to the last day in September and between 10 AM and 6 PM. Contact the Quabbin Visitor Center for more information.
<input type="checkbox"/> 9	Limited swimming access is allowed within a designated area of Rutland State Park, a DEM managed facility. See posted restrictions.
<input type="checkbox"/> 10	Limited swimming access is allowed in a designated area on Comet Pond, according to posted restrictions and during the designated season.
<input type="checkbox"/> 11	These activities are allowed only by written permission from the Superintendent, Quabbin Section
<input type="checkbox"/> 12	Groups up to 25 individuals are asked to notify the MDC/DWM prior to access on MDC/DWM lands. Groups exceeding more than 25 individuals or 15 horseback riders with horse (in the Ware River Watershed only), are required to submit a MDC/DWM Group Access Permit application at least 3 weeks prior to planned access. Contact Quabbin Visitor Center, Ware River Field Office, or MDC/DWM's web site for an access permit application
<input type="checkbox"/> 13	The MDC/DWM requests visitors to pickup and properly dispose of any fecal waste within 100' of a tributary or surface waters
<input type="checkbox"/> 14	Horseback riding access is allowed on MDC/DWM Designated Horseback Riding Roads and Trails only in the Ware River Watershed and according to specific restrictions (e.g., no riding during mud season, permit required for group rides of 15 or more, no watering of horses in tributaries, etc.) See Fact Sheet. MDC/DWM Designated Horseback Riding Roads and Trails Map is available from the Quabbin Visitor Center, Ware River Field Office and MDC/DWM web site.
<input type="checkbox"/> 15	Camping includes the use of tents, trailers, lean-tos, and motor homes. Camping access is prohibited with the Ware River Reservation. Limited camping on MDC/DWM Off-Reservation is allowed with written permission from the Superintendent only. Contact the Ware River Field office for more information (508) 882-3636
Contact information:	
<ul style="list-style-type: none"> ➤ Quabbin Visitor Center – Visit the Center at the Winsor Dam in Belchertown open 9-4:30 daily. (413) 323-7221 ➤ Ware River Field Office – Contact the MDC/DWM field staff at (508) 882-3636 ➤ MDC/DWM Watershed Rangers – Contact the Watershed Rangers at (413) 323-0191 ➤ Massachusetts State Police – Report violations/emergencies to the State Police at (413) 323-7561 (*SP) ➤ See MDC/DWM's Home Page – www.magnet.state.ma.us/mdc/water.htm 	

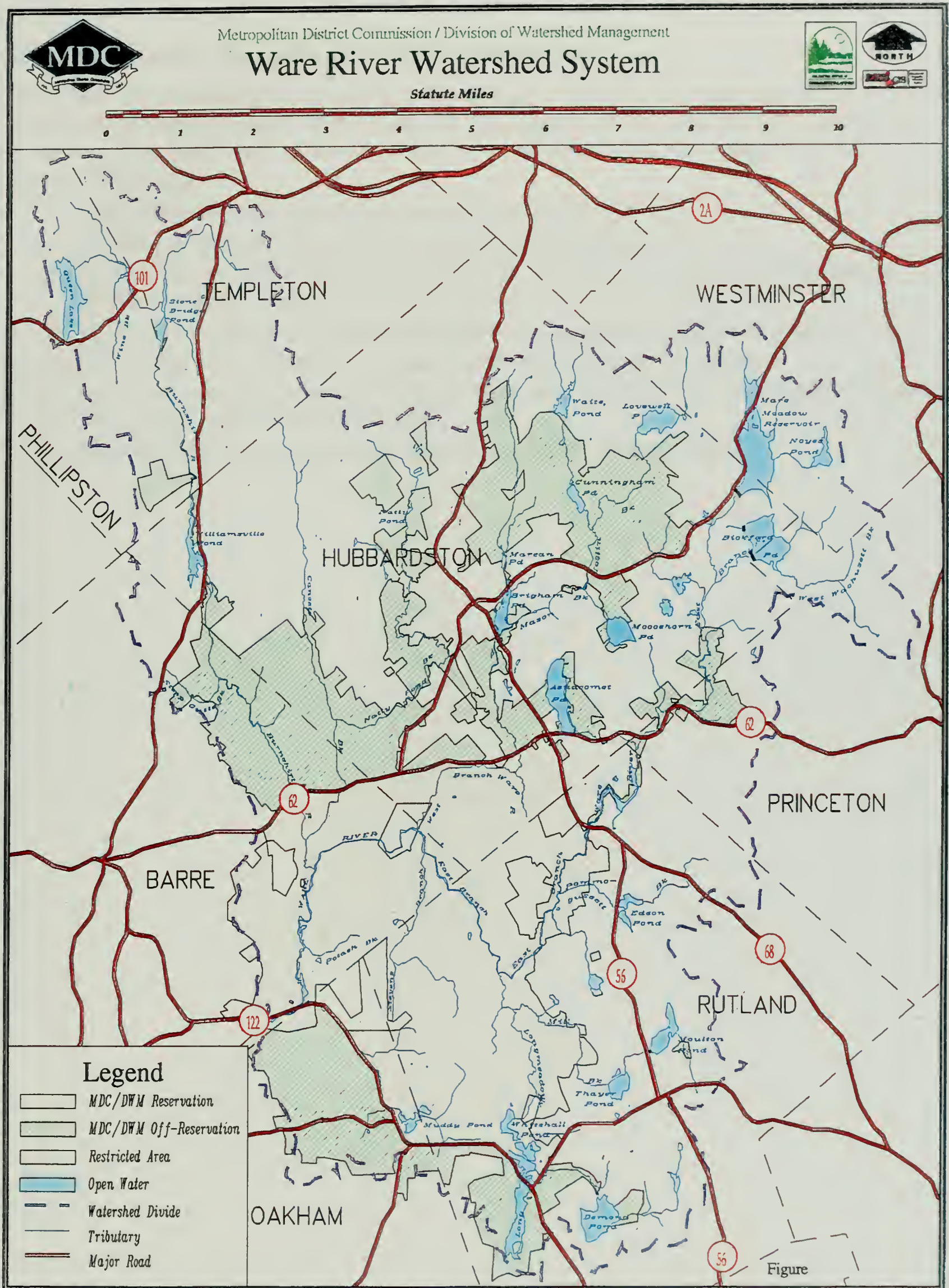


Figure 6 – MDC/DWM Ware River Watershed System Map

Key Implementation Strategies found in the updated Plan:

The MDC/DWM staff will implement the policies, control measures, activities, and programs cited in this Plan beginning in January 2000. In general, Plan implementation strategies will include the following seven action steps list below. A more detailed implementation strategy is located in Chapter 5 of the Plan.

- ◆ Maintaining and improving structural access controls, as needed;
- ◆ Monitoring, referral (when necessary), and corrective actions;
- ◆ Maintaining and refining a tracking system and electronic database to document threats, corrective actions taken, and current status;
- ◆ Providing educational programs and opportunities to promote watershed protection;
- ◆ Conducting Plan evaluation and program/plan modification, as necessary.
- ◆ Partnering initiatives with the Ware River Watershed Advisory Committee (WRWAC), State Police, state agencies, and others; and
- ◆ Implementing new programs to focus on signage and sanitary facilities.

2 Ware River Watershed Assessment – 1998

Water distributed from the Quabbin Reservoir has not been implicated in any waterborne disease outbreak, according to the MA Department of Public Health (DPH) who monitors waterborne disease outbreaks in both filtered and unfiltered water supply systems (DPH, 1998). The U.S. Environmental Protection Agency (EPA) and MA Department of Environmental Protection (DEP) conduct strict oversight of MDC/DWM operations and watershed protection activities in the Ware River watershed. The DEP conducts annual inspections of the system because MDC/DWM is a public drinking water supplier. DEP uses four distinct criteria in its evaluation of MDC/DWM's watershed protection efforts:

- demonstration and implementation of watershed control;
- on-site inspection of the water supply system;
- documented absence of waterborne disease outbreaks; and
- compliance with the existing U.S. Safe Drinking Water Act's maximum contaminant levels.

For the past eight years, the MA DEP has found that the MDC/DWM has demonstrated adequate control measures for water quality protection. In 1998, the MA DEP on-site inspection found that MDC/DWM Quabbin Reservoir and Ware River watersheds continue to meet all the necessary criteria to maintain an avoidance of filtration according to the Safe Drinking Water Act Amendments. However, based on the 1998 inspection the MA DEP recommended that the MDC/DWM update the Ware River Watershed Public Access Plan (DEP, 1998).

2.1 Ware River Watershed - Historical Background

The MDC/DWM's Ware River watershed, approximately 62,000 acres, is the topographically defined land area that contributes water to the MWRA's Ware River intake works (a.k.a., "Roger H. Longeran Intake") in Barre, Massachusetts. The area around the intake and surrounded by the major highways is classified as the Ware River Reservation, and MDC/DWM lands outside of the Reservation are classified as Off-Reservation lands (Chapter 737 of the Acts of 1972). According to the Ware River Act (Chapter 375 of the Acts of 1926), the MDC Water Supply Commission commenced land acquisition and construction to divert the flood waters of the Ware River to the Wachusett Reservoir (Howe, 1951). During this time the Commission purchased approximately 2,000 acres of private lands, including farms, above the intake for water quality protection. Following the original land purchase, the Commission removed approximately 100 structures from the newly acquired lands to better protect the drinking water supply from existing and future pollution threats (Steve Drawbridge and Clif Read, personal communication). Division staff are mindful of the history of the Ware River Act, and respect the sacrifices made by over 2,000 local families in the Ware River watershed towns to help protect the municipal drinking water supply (Greene, 1991).

Waters, in excess of 85 million gallons a day, during a certain time period, can be diverted from the Ware River, in part, as authorized under Chapter 375 of the Acts of 1926. The diversion of water is limited by Massachusetts' legislation to the period from December 1 to June 1, and may include October 15 to June 15 (Special Report, 1931). Practically speaking, these transfers are also limited to times when the Quabbin Aqueduct is not being used to transfer water stored in the Quabbin Reservoir

MDC/DWM Public Access Management Plan Update - Ware River Watershed January 2000

to Wachusett Reservoir. In 1931 with the completion of the Ware River intake works, the MDC Water Supply Division diverted 12.8 billion gallons of water from the watershed to the Wachusett Reservoir (at the time 85% empty). Today, MDC/DWM and MWRA staff, may use the Ware River Intake to divert "Ware water" either to the Quabbin Reservoir, or to the Wachusett Reservoir. Currently, under MDC/DWM's normal operating procedures, MDC/DWM and MWRA personnel divert Ware River water flows to the Quabbin Reservoir through the Quabbin Aqueduct.

Once the water is diverted into the intake and transferred through the Quabbin Aqueduct toward the Quabbin Reservoir, the water is discharged into the Reservoir at Shaft 11A, east of the baffle dams. The Reservoir's baffle dams force the water to flow several miles to reach Shaft 12, the Quabbin Aqueduct intake structure. Under extreme drought conditions in years past, and possibly in the future, MDC/DWM can divert Ware River water directly to the Wachusett Reservoir in West Boylston, MA. Thus, water from the Ware River watershed can be the source water to both the Quabbin Reservoir and the Wachusett Reservoir. Currently, the net average, annual withdrawal from the Ware River watershed is 25 million gallons per day. The total net average annual withdrawal from the entire system is 266 million gallons per day (MDC, 1998).



Canesto Brook - Hubbardston, MA (Matt Hopkinson, 1999)

2.2 Brief Watershed Description

The Ware River watershed (above the Intake) includes approximately 61,740 acres (96 square miles). The watershed encompasses portions of eight towns - Barre, Hubbardston, Oakham, Phillipston, Princeton, Rutland, Templeton, and Westminster, Massachusetts. The Ware River watershed contributes approximately 7.5% (41 mgd) of the system's safe yield of 300 mgd (MDC, 1998). At a larger scale, the Ware River watershed is within Massachusetts Chicopee River basin. The Chicopee River Basin is shown below (see **Figure 7**). This plan has been reviewed by the Chicopee River Basin Team.

2.2.1 Geology

Formed during the last glacial retreat, the Ware River watershed contains many drumlins (a streamlined ridge or hill of stratified drift) underlain by thick till. In addition, this watershed area contains many wetlands found in broad valleys underlain by thick, stratified glaciofluvial and glaciolacustrine deposits (MDC/Rizzo, 1991; MDC/CDM, 1998). The bedrock geology consists of metamorphic and igneous bedrock units of the Connecticut Valley Belt lithotectonic subdivision. Overall, the bedrock units are massive, resistant to weathering, and impermeable. Consequently, groundwater recharge into bedrock is limited and thus, rates of surface runoff are comparatively high in the Ware River watershed (MDC/Rizzo, 1991).

2.2.2 Soils and Septic Systems

Some soil types in the Ware River watershed have rapid permeability, including loamy sand and gravel typically found in valleys and in glacial outwash along river corridors. Other soil types present in the watershed have moderate to slow permeability, or very slow percolation rates (MDC/CDM, 1998). Well-drained soils, having rapid permeability, are typically not well suited for the disposal of wastewater through septic systems. However, septic system engineers can overcome soil unsuitability through careful design, siting, and maintenance of septic systems constructed or repaired according to the 1995 Massachusetts Title 5 regulations. These regulations establish specific criteria for new systems. The regulations also require inspection of existing septic systems at the point of sale. The regulations require the sellers to bring those "failed" septic systems into regulatory compliance. Massachusetts' septic system regulation requires that the soil characteristics be considered in septic system design. This is an important environmental regulations protecting water quality.

2.2.3 Hydrology

The water level in the Ware River fluctuates seasonally due to natural factors such as precipitation, evaporation, evapotranspiration, wildlife activities (e.g., construction of beaver dams), as well as due to human factors. While the elevation changes on the river primarily depend on natural factors, operational factors, including flood control activities by the Army Corps of Engineers at the Barre Falls Dam, influence the river's elevation and thus play a role in diversion decisions.

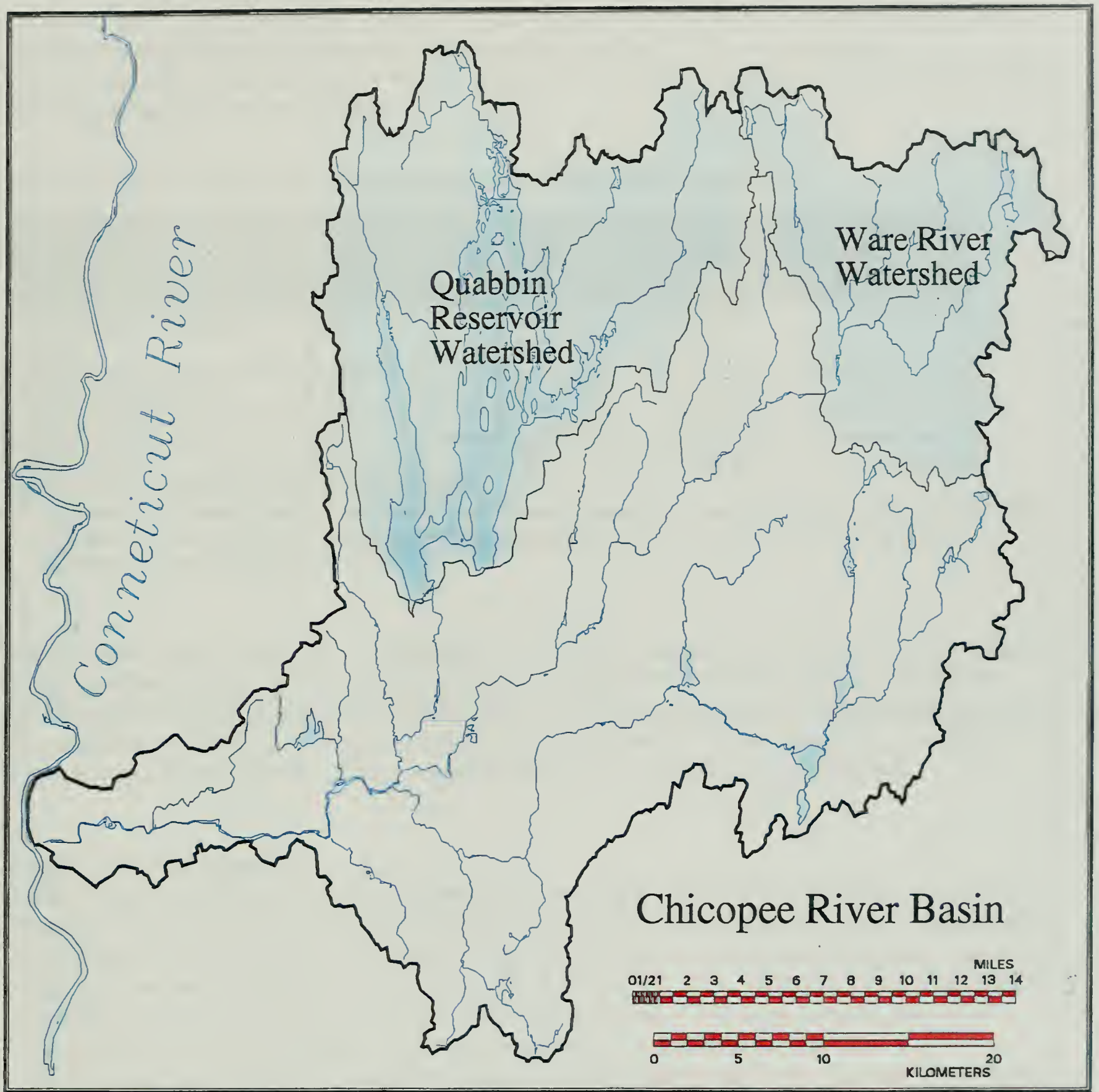


Figure 7 - The MDC/DWM Quabbin Reservoir and Ware River Watersheds superimposed over the Chicopee River Basin, Massachusetts

Water Quantity

Water resource professionals define a safe yield of a water supply system as the annual volume of water that can be safely withdrawn without adverse impact on the system. The entire MDC/MWRA system safe yield is approximately 300 million gallons per day (J. Gregoire, personal communication). At the time of this writing, the present demand on the system is approximately 266 million gallons per day (see **Table 4**).

Table 4 - System Safe Yield Contributions from MDC/DWM Watersheds

Source Water	Watershed Area* (square miles)	Safe Yield (mgd)	Net Average Annual Withdrawal ⁺ (mgd)
Ware River at MWRA Intake	96	41 mgd	25 mgd
Quabbin Reservoir	187	158 mgd	140 mgd
Wachusett Reservoir	117	101 mgd	119 mgd
TOTALS	400	300 mgd	266 mgd

Source: (MDC, 1998) (mgd = million gallons per day)

* Including area of reservoir surface for Quabbin and Wachusett Reservoirs. Average of 1987, 1990, 1992, and 1994. Withdrawals from each of the three sources vary considerably from year to year, and have declined fairly significantly over the 1987 to 1998 period.

Table 4 shows that the Ware River watershed is an important component of the entire system relative to its contribution to the system's safe yield. Both the MDC/DWM and the MWRA consider the Ware River watershed as important as the Quabbin and Wachusett reservoir watersheds because this is a public water supply system with an indefinite time horizon. Thus, the Ware River watershed helps ensure water supply for a future larger population in the Boston metropolitan area.

Land Cover and Land Use

Undeveloped-forested lands are the dominant land cover, approximately seventy-five percent, of the Ware River (see **Table 5**). Approximately five percent of the watershed area is used for agriculture. Residential land use comprises approximately three percent of the watershed. Agricultural use is only slightly higher than residential use in the Ware River watershed. Commercial/Industrial use, in 1997, represents less than one percent of the land use in the watershed. This large, forested land cover offers attractions to those seeking residential relocation and recreational destinations. Based on analysis of land cover, land use, and field surveys, the MDC/DWM staff have estimated that existing recreational activity occurs in approximately eighty-nine percent of the Ware River watershed area (i.e., throughout the forestlands, wetlands, agricultural lands, and open water). Compared to the entire system, the Ware River watershed is a good representation of the aggregate land use and land cover (see **Figure 8**).

Table 5 - General Land Cover and Land Use Estimates throughout MDC/DWM Watersheds (excluding Reservoir areas)

Watershed	Forest Cover	Wetland cover	Surface water	Agricultural use	Commercial/ Industrial use	Other
Ware River	75 %	11 %	3 %	5 %	0.2 %	4.8 %
Wachusett Reservoir	67 %	8 %	2 %	8 %	0.6 %	5.4 %
Quabbin Reservoir	87 %	6 %	0.3 %	3 %	0.1 %	0.6 %
Totals	77 %	8 %	2	5 %	0.3 %	3.7 %

Source: (MDC/DWM, MWRA, and CDM, 1997)

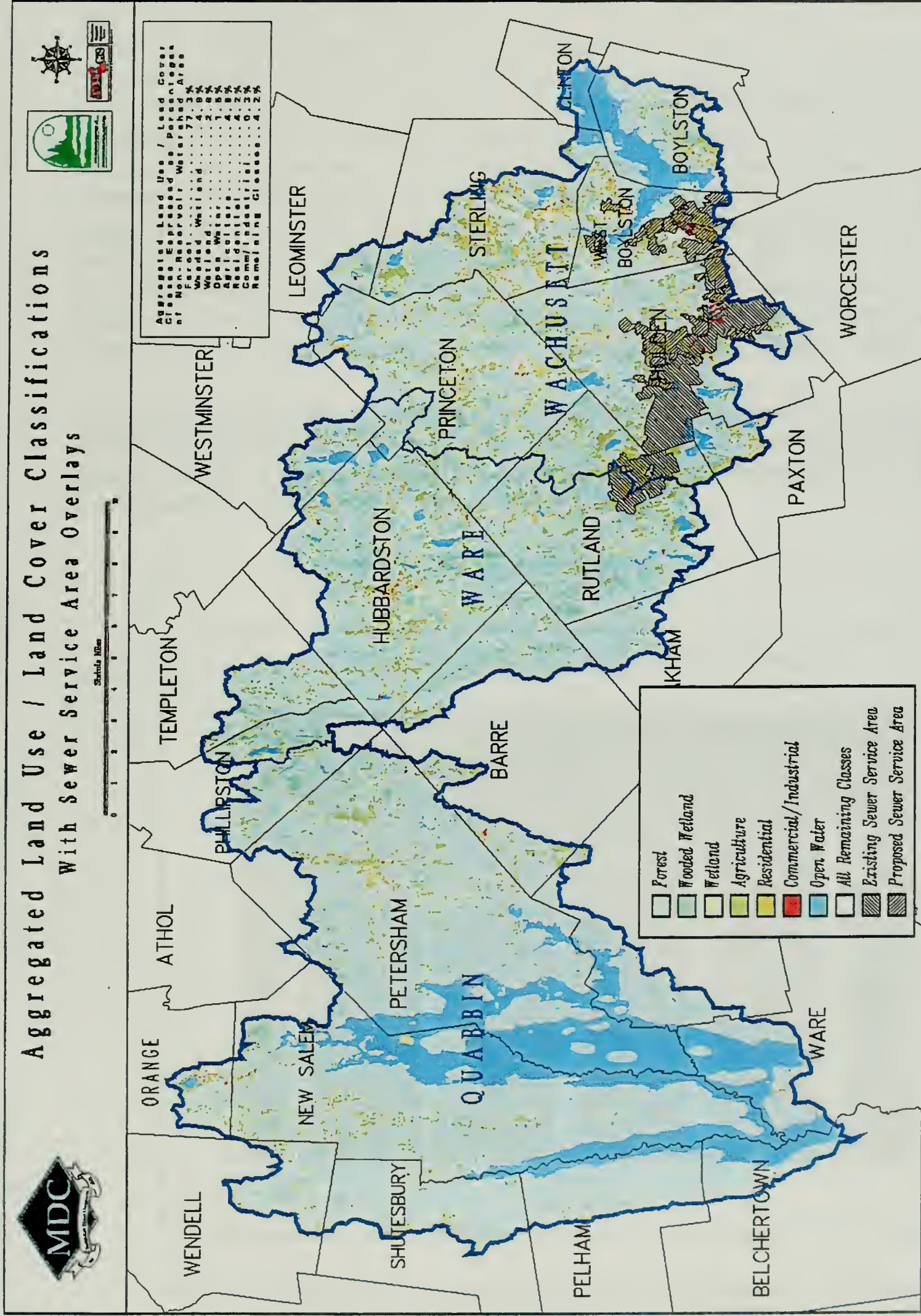


Figure 8 - Aggregated Land Use / Land Cover Classifications within MDC/DWM Watersheds

As of 1998, the MDC/DWM owns or directly controls approximately forty-one percent (41%) of the entire MDC/DWM-MWRA water supply's watershed system, exclusive of the reservoirs. MDC/DWM has extensive land ownership and significant land use control in the Ware River watershed. MDC/DWM owns approximately thirty-seven percent (37%) of the Ware River watershed and specifically regulates approximately 18,747 acres in the primary protection zones and 61,660 acres in the secondary protection zones affected by the 1992 Watershed Protection Act (Craig Fitzgerald, personal communication). The MDC/DWM regulates these areas according to specific and general regulations found in 350 CMR 11.00. According to Metropolitan District Commission's Watershed Protection regulations (350 CMR 11.09), the MDC/DWM along with the MA DEP have general environmental protection control and enforcement authority throughout the remainder of the watershed. For a more in-depth description of the MDC/DWM's land management activities in the Ware River watershed, please refer to the Division's *Watershed Protection Plan Updates*, annual *MDC/DWM Sanitary Surveys*, *MDC/DWM Water Quality reports*, *MDC/DWM Land Management Plans* and *Quabbin and Wachusett Reservoir Watersheds Aquatic Wildlife Pathogen Control Zones*.

Population trends have shown rapid growth within Ware River watershed communities between the 1980 and 1990 census (see **Figure 9**). Population projections in these communities suggest steady growth within the watershed into the 21st century (Rarig, 1994). MDC/DWM will continue to monitor land use and land cover changes over time.

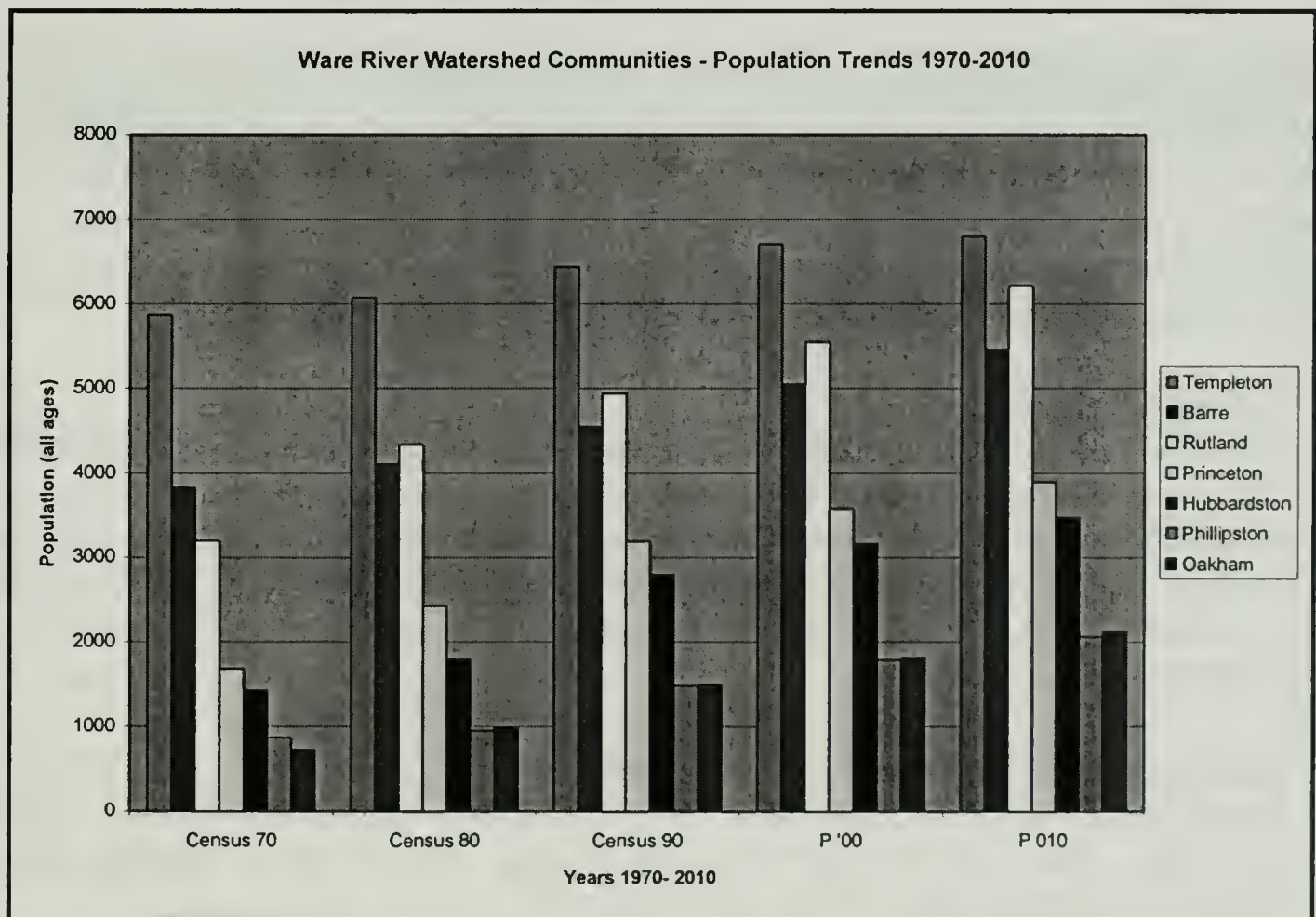


Figure 9 - Population trends 1970-2010 in Ware River watershed communities

2.3 MDC/DWM Watershed Sanitary Surveys

MDC/DWM staff conduct annual sanitary surveys of the three watersheds managed and controlled by the MDC/DWM. The three water supply watersheds are Quabbin Reservoir, Ware River, and Wachusett Reservoir watersheds. The purpose of an MDC/DWM Sanitary Survey is to describe watershed characteristics, to identify existing or potential pollution problems within the watershed, to make recommendations for corrective steps, and to take action regarding elimination or improvement of existing pollution problems within a watershed or basin.

As part of the MDC/DWM Sanitary Survey Program, Environmental Quality (EQ) staff have classified the Ware River watershed into four Sanitary Districts: 1) East Branch Ware River; 2) West Branch Ware River; 3) Burnshirt, Canesto, & Natty Brooks; and 4) Coldbrook & Longmeadow Brooks. EQ staff survey at least one Sanitary District in the principle watersheds of the Quabbin Reservoir, Wachusett Reservoir, and Ware River, annually.

Summary of MDC/DWM's Sanitary Surveys in the Ware River Watershed

MDC/DWM staff have documented in the Ware River watershed recreational impacts on MDC/DWM lands such as:

- sedimentation and nutrient loading, as well as the loss of vegetation cover, from eroding trails and unprotected water crossings;
- improper disposal of fecal waste (from both humans and domestic animals);
- introduction of petrochemicals and additives; and
- trash dumping on MDC/DWM's drinking water supply lands.

These pollution sources have been identified within each Sanitary District of the Ware River watershed over the past six years. In addition, these recreational impacts have been distributed spatially and temporally throughout the watershed's four sanitary districts. MDC/DWM staff have documented that both the variety of recreational activities and the frequency of recreational use, overall, have dramatically increased over the past ten years on MDC/DWM water supply lands and especially in the Ware River Watershed in particular (Eager, 1992; Hopkinson, 1994, Campbell, 1994).

Burnshirt Sanitary District

This report identifies eleven existing and potential pollutant types in the Burnshirt Sanitary District. These sources include: gravel excavation projects, automobile junkyards, direct discharge of road runoff into surface waters, waste disposal areas, incomplete or abandoned projects, illegal residential occupation, failure of older residential septic systems, recreation (e.g., waste and disturbance from horseback riding), wildlife population increases (e.g., beaver and deer), and general land conversion for development.

East Branch Sanitary District - Sanitary Survey

Based on thirty-six field inspections, MDC/DWM staff reported that the most frequently identified problems in the East Branch Ware River Sanitary District were camping, campfires, off-road vehicles, and other forms of recreational impact.

Coldbrook/Longmeadow Sanitary District - Sanitary Survey

This survey reports that of the forty-six field inspections, the most frequent problems in the Coldbrook/Longmeadow River Sanitary District were related to fuel storage tanks, sanitation problems requiring further investigations, recreation related problems, and storm water drainage structures associated with public roads.

West Branch Ware River Sanitary District - Sanitary Survey

Based on seventy-four field inspections, the most frequently identified problems in the West Branch Ware River Sanitary District were illegal dumping, wastewater disposal, recreational violations, and potential groundwater contamination sources.

2.4 MDC/DWM Water Quality Reports 1994-1998 - Quabbin Laboratory

EQ staff conduct water-sampling activities at eighteen sites within the Ware River watershed on a bimonthly basis. EQ staff analyze most of the water samples at the DEP certified Quabbin Laboratory. Select water quality parameters measured from samples taken at one sampling site, Shaft #8 (Ware River Intake) are summarized below (see **Table 6**). Division staff consider the water quality at Shaft # 8 to represent the average annual water quality collected off the Ware River watershed above the intake works. MDC/DWM's water quality goals are limited just to the water at the Ware River intake, but encompass the entire watershed, even remote locations.

Table 6 - Select Average Water Quality Parameters Measured at Shaft #8, Ware River Intake (1994-1998)

Water Quality Parameter	1998	1997	1996	1995	1994
Average Turbidity NTU (min-max)	1.2 (0.4-2.8)	1.1 (0.4-2.8)	0.9 (0.3- 2.2)	1.1 (0.4-2.5)	1.0 (0.4-2.3)
Average pH (min-max)	6.3 (5.8-6.6)	6.4 (6.0-8.0)	6.13 (5.7-6.6)	6.31 (5.4-6.7)	6.28 (5.6-6.8)
Average Temperature °C (min-max)	11°C (0-23)	10°C (0-23)	10°C (0-23)	10°C (0-23)	9°C (0-24)
Average Fecal coliform colonies/100mL (min-max)	25 (0-210)	12 (0-70)	31 (0-230)	41 (0-290)	30 (0-270)

Sources: (MDC/DWM Water Quality Reports 1993-1997)

2.5 Previous MDC/DWM Public Access Plans

The Massachusetts Legislature directs the MDC/DWM staff to produce periodic management plans which address recreational issues on watershed lands under MDC/DWM's care and control (M.G.L Chapter 372., 1984). In 1988, the MDC/DWM staff, with the Quabbin Watershed Advisory Committee (QWAC), developed the *Recreation and Public Access Policy and Plan for the Quabbin Reservoir and Ware River Watersheds*. This was the Division's first management plan specifically designed to control and monitor public access and recreational activities on MDC/DWM controlled waters and lands. In 1993, the MDC/DWM developed a public access plan for the Sudbury Reservoir Watershed (O'Connor and Zilligen, 1993). The Sudbury Reservoir is an emergency drinking water reservoir and urban watershed system. In 1996, MDC/DWM developed the *Wachusett Public Access Plan* (O'Connor and Zilligen, 1996) to guide and control public access within the MDC/DWM lands of the Wachusett Reservoir (Steinberg and Clark, 1999). Most recently, in 1998, MDC/DWM updated the 1988 Public Access Plan for the Quabbin Reservoir watershed system by producing the *1998 MDC Public Access Plan for the Quabbin Reservoir Watershed System* (Gustavsen, Pula, et al., 1998). In a recent survey of comparable water supply systems conducted by the Columbus Division of Water, the MDC/DWM's public access policies and implementation practices were recommended as models for further review and study (Winters, 1999).

2.6 MDC/DWM Public Access Management

The *MDC/DWM Public Access Management Plan Update - Ware River Watershed*, part of MDC/DWM's comprehensive watershed protection program, is designed to guide and effectively control public access and recreational activities within approximately 23,000 acres of MDC/DWM managed lands and waters in the Ware River watershed (see **Figure 6**). Watershed protection includes water quantity and quality protection, public health protection, ecological conservation; and the Division's watershed land maintenance activities (e.g., silvicultural operations activities, etc.) (Dunn and Leopold, 1978).

2.7 The Need for the Public Access Plan Update

Since 1988, MDC/DWM staff have observed and reported an increase in both the types and intensity of recreational activities conducted within its water supply lands of the Ware River. At the same time, the Division has greatly expanded its overall watershed protection program, which includes public access management. In a thorough review, MDC/DWM staff identified four specific needs for an updated Public Access Plan:

- 1) to address new recreational activities and public access policy gaps;
- 2) to clarify new and existing public access policies using updated maps and fact sheets;
- 3) to apply new scientific and regulatory information to updated MDC/DWM's public access policies; and
- 4) to guide appropriate public access on MDC/DWM lands in the Ware River watershed given increasing population and development pressures.

In addition to the need for updated information, DWM staff also recommended ways to better communicate the updated information (Stern, 1996)(Graef, 1990). Thus, MDC/DWM has added four elements to the updated Plan to make it easier to use and understand:

- a series of MDC/DWM designated road and trail maps for specific activities (e.g., horseback riding);
- a summary of new MDC/DWM policy initiatives for public access to MDC/DWM managed lands and waters in the Ware River Watershed;
- a glossary of terms used; and
- a comprehensive Appendix.

Increased recreational use of protected drinking water supply lands creates new regulatory, financial, and public safety issues for MDC/DWM. For example, requests for the installation and maintenance of new sanitary facilities have been received, while other access requests necessitate enhanced monitoring. Other types of secondary impacts from recreational access observed by MDC/DWM staff include improper trash disposal, increased road and trail erosion, unbridged stream crossings, and increased fire risk to MDC/DWM lands.

2.8 Regulatory Overview

To protect public health, public drinking water supplies are highly regulated in the United States. Both Federal and State laws require water providers to meet rigorous water quality standards for source waters. These standards change over time as new information develops. The U.S. Environmental Protection Agency administers Federal water quality regulations throughout the country. In Massachusetts, the Massachusetts Department of Environmental Protection (DEP) has been given primary responsibility for assuring compliance with State and Federal drinking water regulations. The DEP monitors water quality throughout the MWRA/MDC water system for regulatory compliance with State and Federal regulations.

U.S. Safe Drinking Water Act and the 1989 Surface Water Treatment Rule

Nationally, the Safe Drinking Water Act (SDWA) provides the legal authority for the EPA's promulgation of regulations designed to protect the US drinking water supplies from physical, chemical, and biological (including bacterial) contaminants. The 1986 Congressional reauthorization of the SDWA included the Surface Water Treatment Rule (SWTR) promulgated in 1989. This rule tripled the number of water contaminants to be monitored in both raw and finished water supplies. The SWTR also required mandatory filtration of surface water supplies unless specific criteria for effective watershed management and source water protection were met and maintained. The MDC's first Public Access Plan was developed in response to the 1989 Surface Water Treatment Rule criteria for watershed protection.

In Massachusetts, public drinking water supply criteria are described in the State Surface Water Supply Regulations (310 CMR 22.00), a subset of Massachusetts Drinking Water Regulations. The Massachusetts DEP also requires water suppliers that obtain a filtration waiver to develop and implement an effective watershed protection plan. Accordingly, the DEP requires a watershed protection plan to identify and mitigate significant sources of pollution within the watershed as well as to demonstrate a high level of control over any activities that could introduce disease organisms to, or otherwise degrade the water supply.

1996 Safe Drinking Water Act Amendments

The Safe Drinking Water Act Amendments were signed into law on August 6, 1996. Two key features included in the 1996 amendments are: 1) drinking water source protection programs to *MDC/DWM Public Access Management Plan Update - Ware River Watershed January 2000*

protect drinking water from pollution; and 2) better public health programs regarding key drinking water standards for, and health studies on, *cryptosporidium spp.*, certain carcinogens, and other water contaminants. Many water professionals consider the 1996 Amendments to represent significant progress in improving public health protection through enhanced protection of the nation's drinking water supplies. Further, the 1996 Amendments directed all public water suppliers (i.e., MWRA), to develop a "Consumer Confidence Report" on their system as well as to distribute the report to each consumer in 1999.

MDC/DWM Watershed Protection Plan Updates 1998 and 1999

MDC/DWM and MWRA developed two comprehensive Watershed Protection Plans (WPP), one for the Wachusett Reservoir watershed, the other for the Quabbin Reservoir and Ware River watersheds combined, in the early 1990's, in response to the 1986 Safe Drinking Water Act Amendments and 1989 Surface Water Treatment Rule (SWTR). The *Wachusett Reservoir Watershed Protection Plan Update* was completed in 1998, integrating the 1996 SDWA amendments. The revision of the Watershed Protection Plan for the Quabbin Reservoir and Ware River watersheds began in 1999. In all of these plans, MDC/DWM considers recreational activities to cause threats to water quality. These contamination sources include improper human and animal fecal waste disposal; trash, debris and other waste accumulations; and trail erosion and resulting sedimentation issues.

2.9 Plan Update Resources

MDC/DWM staff updated the Public Access Plan using an analytic-deliberative process (NRC, 1996). This process integrates field experience, research, and public participation. The goal of this process is to develop a well-synthesized and balanced management plan. The next section contains a brief description of the resources used to update this Plan.

MDC/DWM Public Access Working Group – Field Experience

Representatives from each work group in the MDC/DWM Quabbin Section make up the MDC/DWM Public Access Working Group. This group serves to guide the revision process and content of the Public Access Plan updates. When assessing the water quality effects of public access and recreational activities within a water supply watershed, MDC/DWM's working group considers long-term water quality influences along with short term, human dimensions (i.e., political, economic, and social considerations). When developing its Public Access policies, the Division tries to strike a balance between public health protection and controlled amounts of low intensity, public access within the water supply lands. Controlled public access can assist water supply protection by increasing public awareness for the water supply watershed, alerting the Division to problems on the watershed, and discouraging unauthorized access on lands or waters. The Division's Public Access Working Group uses adaptive management techniques to revise, reassess, and deliberate its recreational policies within a 5-10 year cycle, depending on circumstances. Given a mandate to provide pure water for current and future generations, the Division will remain cautious in allowing new or expanded activities. This guiding principal is articulated in the revised MDC/DWM Master Policy Statement.

Research and Pilot Studies

Many groups conduct research and pilot studies within the MDC/DWM system's watersheds and reservoirs. Division staff conduct in-house research on a continuous basis related to water quality and quantity management decisions. In addition, MDC/DWM sponsors academic groups and consultants conducting specialized assessments of the water supply system.

MDC/DWM Public Access Management Plan Update - Ware River Watershed January 2000

In-house Research

MDC/DWM continually monitors water quality throughout all the watersheds for events that may influence the water quality for a short duration. In addition, Division staff monitor land uses and land cover for activities which may slowly or cumulatively affect water quality for a longer duration. For example, the Division conducted in-house research regarding human sanitation practices within remote areas open to the public (Hopkinson, 1993). In response to the research findings, the MDC/DWM has implemented a limited program of portable sanitary facilities in closely monitored areas. In 1995, the Division conducted a recreational access compliance survey within the Quabbin Reservoir watershed. The purpose of the study was to determine the level of user awareness of MDC/DWM rules. Recently, the Division staff have developed a series of relational databases which allow queries of on-going violation reports and enforcement actions, regulatory work case status, and field visit reports from watershed monitoring activities. These databases can be used to detect the location of the greatest recreational impacts and pressures within all three watersheds of the MDC/DWM system.

Academic Research

The MDC/DWM has supported academic research to study and to conduct water quality modeling research in both the Quabbin and Wachusett Reservoirs. The modeling studies allow MDC/DWM to observe the rate of movement and residence times of possible water contaminants (Tobiason, 1998). In addition, recently developed models include methods to differentiate microorganisms and their source(s) (Long, 1999). These research models use MDC/DWM's massive database of water quality parameters maintained and updated daily, weekly, bimonthly and annually by the Quabbin Reservoir's Water Quality laboratory staff.

Public Access Literature Review

With the development of each Public Access Plan, Division staff and consultants have conducted a series of literature reviews regarding water quality protection and public access (MDC 1988, 1996, 1998, 1999). The references cited in this Plan represent a small percentage of references reviewed by staff during the update process.

2.10 Public Involvement 1998-1999

Public involvement and participation was an important resource used in the Plan update. The MDC/DWM staff recognizes several types of stakeholders affected by *MDC/DWM Public Access Management Plan Update – Ware River Watershed*. The Division staff considered the following four types of stakeholders:

- people who live inside the watershed areas who use the Division lands for recreation;
- people who live inside the watershed with non-recreation based concerns, such as the local tax base and community services, historical issues related to current land use practices and the preservation of historic/prehistoric resources;
- people who live outside the watershed areas who use Division lands for recreation; and
- the water supplier, ratepayers and other water consumers.

Since the inception of the Division's first Public Access Plan, MDC/DWM staff have specifically focused on understanding and incorporating public input. Staff firmly believes that public opinion improves its management decisions related to the Watershed Protection Program.

MDC/DWM Public Access Management Plan Update - Ware River Watershed January 2000

Within the past decade, the Division's stakeholders have become increasingly more aware of the relationship between safe drinking water and public health protection. The nightly news, recent popular literature, and recent films (e.g., *A Civil Action*) have introduced and discussed the many potential threats to public drinking water sources as well as the public health consequences of these threats. The topics of a compromised drinking water supply system include introduction of *Cryptosporidium spp* and all other pathogens, exotic nuisance plants and animals (e.g., purple loosestrife and zebra mussels), pesticides, lead, chlorine, trihalomethanes, and the implications of an aging infrastructure on water aesthetics and quality.

Advisory Committees, Interest Groups, Abutters, and Other Stakeholders

The *MDC/DWM Public Access Management Plan Update* and its implementation involve not only an internal working group, but also legislatively mandated advisory committees, interest groups, and a variety of individual stakeholders from within and outside the watershed area. Three Advisory Committees worked with MDC/DWM staff to update the Plan: 1) the Ware River Watershed Advisory Committee (WRWAC); 2) Water Supply Citizens Advisory Committee (WSCAC); and 3) the Quabbin Watershed Advisory Committee (QWAC). In addition, many formal and informal interest groups have contacted the MDC/DWM concerning public access (e.g., horseback riding clubs, snowmobile clubs, motorboat associations, as well as supporters of wilderness and only passive recreation.) Recognizing the important role of its abutters in public access management, the MDC/DWM distributed a questionnaire to approximately 600 private landowners whose land abuts MDC/DWM lands in the Ware River Watershed (Gustavsen & Hopkinson, 2000). The purpose of the questionnaire was to solicit input regarding changes to the Public Access Plan.

Ware River Watershed Advisory Committee (WRWAC)

In 1995, the Massachusetts legislature passed an act creating the Ware River Watershed Advisory Committee (WRWAC). This Act relieved the Quabbin Watershed Advisory Committee (QWAC) of its duties within the Ware River Watershed. The purpose of the WRWAC is to "advise the division on its policies and regulations regarding recreational activities, land use and environmental, wildlife and habitat matters within the Ware River waters." This legislation, introduced by a local citizen and sponsored by a local Senator, directs the specific composition of the new committee. The legislation states that the WRWAC will be composed of:

"...one person from three names nominated by each of the following organizations: the Massachusetts Council of Sportsmen, the Worcester County League of Sportsmen, Trout Unlimited, a rod and gun club located in the town of Barre, Hubbardston, Oakham or Rutland, a designee of the board of selectmen of each of the towns of Barre, Hubbardston, Oakham and Rutland, a representative of the historical societies in each of the towns of Barre, Hubbardston, Oakham and Rutland, a representative of the Massachusetts Wildlife Federation, a representative of the Massachusetts Audubon Society, a representative of the Sierra Club, and a representative of the Upper Ware river watershed association and one member from the general public..." (M.G.L. Ch. 92, § 104)

The newly mandated advisory committee for the Ware River watershed complements the Division's 1995 decision to develop separate Public Access Plans for both the Quabbin Reservoir watershed and the Ware River watershed. In 1997, the MDC/DWM established the Ware River Watershed Advisory Committee (WRWAC). The purpose of the WRWAC is to advise the MDC/DWM on its policies and regulations regarding recreational activities, land use, wildlife, and habitat matters within the Ware River watershed. Between January 1998 and November 1999, the WRWAC met fifteen times to discuss public access issues on MDC/DWM lands. The topics discussed and ideas generated during these meetings are detailed in the Appendix. In October 1999, the WRWAC submitted a list of ten specific recommendations regarding the Divisions' draft MDC/DWM Public Access *MDC/DWM Public Access Management Plan Update - Ware River Watershed January 2000*

Management Plan Update – Ware River Watershed. Most of the recommendations were incorporated into the Final Plan (see Appendix).

Other Advisory Committees

In addition to the WRWAC, the Water Supply Citizens Advisory Committee (WSCAC) and the Quabbin Watershed Advisory Committee (QWAC) advise the Division regarding issues involving recreational use of water supply lands and waters in the Ware River watershed. WSCAC has been involved with the development of public access plans for all MDC/DWM properties over the years. Their interest is derived from the belief that a “successful watershed management plan must focus on any effort to preserve and promote water quality...”. Recently, WSCAC attended the September 1998 Workshop, participated in the draft Plan development, gave testimony at the Public Hearing in November 1999, and submitted a letter of support during the final Plan review period. WSCAC’s input can be best summarized by this direct quote:

“We therefore conclude that your plan is generally a fair compromise between your duty to protect water quality and your desire to allow as much recreational use as is congruent with that duty. We would not, however, want to see any weakening of this balance which seems to us to tends towards over-use rather than under-use.”

Abutters

Approximately eight hundred and fifty parcels owned by private landowners, municipalities, and businesses abut DWM lands in the Ware River watershed (in this case, abutting is defined as within 100 feet of MDC/DWM property lines). Therefore, a change in public access policies on MDC/DWM can have a dramatic effect on many private individuals. In view of this, the Division notified its abutters in the Ware River watershed of the public access management plan update process, the distribution of the draft plan, and the final public hearing date. In the questionnaire, the Division identified general awareness of existing public access rules and gaps in user knowledge, perceived benefits and costs of public access on nearby MDC/DWM lands, recreational values, and recreational user conflicts. Approximately 230 questionnaires were returned, of the 642 sent out. The majority of the responding abutters were well aware of public access restrictions in general as well as restrictions on specific user groups (e.g., horseback riders and snowmobilers). In addition, the abutters highly valued wildlife and privacy and seemed to be most concerned with threats caused by motorized vehicles (ATVs, snowmobiles, and cars). The abutter questionnaire also suggested many different types of recreational user conflicts (Gustavsen and Hopkinson, 2000).

User Groups

Several organized user groups were actively involved in the development of the *MDC/DWM Public Access Management Plan Update – Ware River*. Three horseback riding clubs, a local snowmobile club, and boating association were all active in giving the MDC/ DWM their input throughout the process. In addition, Federal and State Senators and Representatives have passed along constituents’ comments, requests, and complaints related to public access on MDC/DWM controlled lands in the Ware River watershed. The MDC/DWM met consistently with these groups over the past year and a half. In the final analysis, these user groups were neither completely satisfied nor completely dissatisfied. This input is summarized in the Appendix.

Individual Stakeholders

MDC/DWM Public Access Management Plan Update - Ware River Watershed January 2000

Individual stakeholders also contributed to the *MDC/DWM Public Access Management Plan Update* by attending our workshop and offering input, sending e-mails, contacting their representatives, and giving testimony during the public hearing and comment period. In general, these stakeholders offered the MDC/DWM input that often opposed or contradicted that of the user groups. This input is also summarized in the Appendix.

2.11 Watershed Ranger Program – Quabbin Section

The need for a watershed specific, ranger program was first identified in the 1991 Watershed Protection Plan for the Quabbin and Ware River watersheds. The plan rated the potential threat to the water supply from recreational use of MDC/DWM lands as moderate to high. The Plan recommended implementing a ranger program to help monitor and educate users to address this threat. In 1992, the need for additional surveillance of Quabbin Reservoir and Ware River watersheds was heightened with the merger of the former MDC Police and State Police and a reduction in field presence. The MDC/DWM Public Access plan for MDC/DWM lands in the Wachusett Reservoir's watershed, completed in 1993, recommended hiring watershed rangers for surveillance of public access and education of visitors. As a result, six MDC/DWM watershed rangers came on staff in the Quabbin/Ware River Section between 1997 and May, 1999.

Program Purpose and Description

The purpose of the ranger program is to change visitor behavior in order to reduce the risk to the water supply through patrol and surveillance of MDC/DWM lands, as well as with and community education. Patrols serve to show a positive, visible MDC/DWM presence, to deter violation of rules and to intervene when violations are observed. The MDC/DWM Watershed Rangers patrol in the Ware River watershed (see **Figure 10**). It should be made clear that the ranger program is not meant to replace the traditional law enforcement function of the Environmental Police Officers (EPOs) and police agencies. While the rangers will contact the police when law enforcement is necessary, their main function is proactive, discouraging illegal activity through a focused patrol and surveillance presence. In addition, rangers have helped to reduce activity that threatens the water supply by providing on- and off-site educational programs. Educational field interpretation will raise public awareness of the need to protect the water supply. Rather than offering general environmental education, public education efforts will focus on watershed science in an effort to create a watershed community that will collectively act as responsible stewards in protecting the water supply. Educational activities will include informal visitor contacts, handouts, maps, signage interpretation, and community outreach.

Existing Problems Facing the Watershed Ranger Program:

Visitor impacts or threats to the water supply vary within each of the MDC/DWM watersheds. Some violations occur even though the perpetrator(s) has full knowledge of MDC/DWM watershed rules and regulations. However, random surveys of visitors to MDC/DWM lands and waters in the Quabbin Reservoir and Ware River watershed indicate that many people are unaware or misinformed of certain rules and regulations. MDC/DWM staff have documented that a uniformed ranger presence serves as a deterrent to violators who are aware of rules and as a way to educate those who are misinformed about the rules. The following list outlines the types of problems that are currently being monitored and addressed by the MDC/DWM Watershed Ranger program in the Ware River watershed.

Current Public Access Issues on MDC/DWM Lands in the Ware River Watershed

- Illegal ATV access
- Snowmobiles in unauthorized areas
- Horses in unauthorized areas
- Trash and debris dumping
- Camping and campfires
- Vandalism to MDC/DWM property
- Bicycling in restricted/unauthorized areas
- Motor vehicle usage in unauthorized areas
- Trespassing

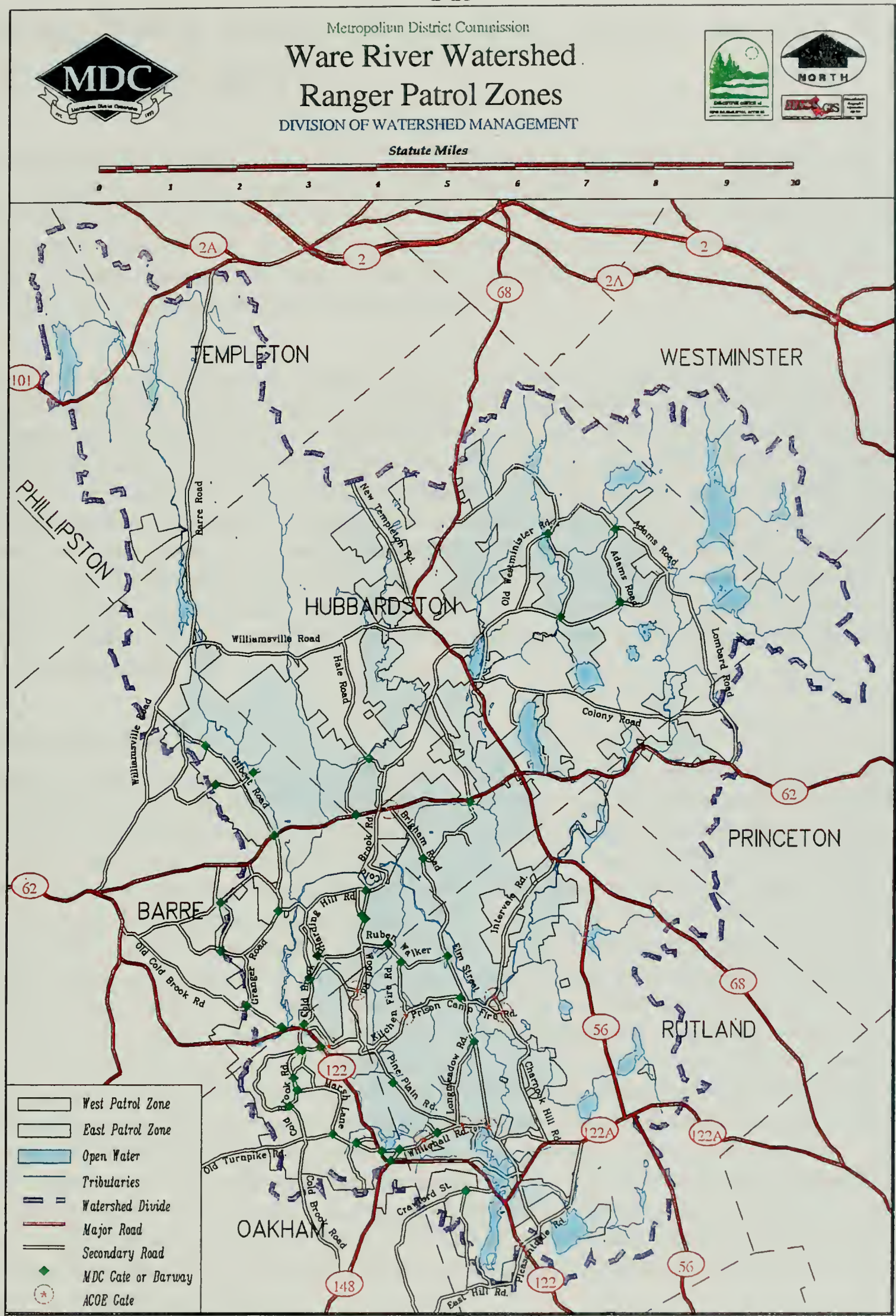


Figure 10 - MDC/DWM Watershed Ranger Patrol Zones - Ware River Watershed

MDC/DWM Public Access Management Plan Update - Ware River Watershed January 2000

3 MDC/DWM Public Access Fact Sheets for the Ware River Watershed

This chapter contains twenty-seven MDC/DWM Public Access Fact Sheets and accompanying maps, where appropriate. Each fact sheet describes MDC/DWM's policy for a recreational activity on MDC/DWM land in the Ware River watershed. The order of the fact sheets corresponds with the order of activities found in the MDC/DWM Public Access Summary (see **Table 7**). These fact sheets are also available at the Quabbin Visitor Center in Belchertown, the MDC/DWM's Field Office in Oakham, or from the MDC/DWM's Watershed Rangers.

The public access fact sheets have a standard format. The first section is a policy summary table giving an overview of whether an activity is allowed with restrictions or prohibited in the three management areas of the watershed. The second section states MDC/DWM's Policy for a specific recreational activity or a group of related activities. The Division's General Rules and Regulations (350 CMR 11.09) follow and may be specific enough to cover the activity. However, when activities are allowed in "designated areas" by permit or at the discretion of the Commission or its designee, the necessary designations are made through the written policy and accompanying map. The fourth section is a brief Discussion regarding policy background. Each discussion tries to explain the context in which the specific policy was formulated. The fifth section, Mechanisms for Control, outline steps being taken by MDC/DWM staff to implement public access management of the specific recreational activity.

Pathogen Prevention

Pathogen prevention is one of the MDC/DWM's primary water quality concerns. Sanitary waste management of human and domestic animal fecal waste near water bodies that supply public drinking water is thus, an important focus in MDC/DWM public access management and control. These public access fact sheets are designed to decrease the potential of water quality contamination by a variety of pollution sources, although microbiological contamination from fecal waste is of the greatest concern. With respect to public access, the MDC/DWM is concerned with microbial threats associated with waterborne disease. Sources of microbes include improperly disposed human, domestic animal, or livestock fecal waste near any water body in a public drinking water supply watershed (Craun, 1990; Dubey, 1990; Rose, 1991; LeChevalier, 1993; Mackenzie, 1994; MDC/CEI, 1998). Diseases caused by *cryptosporidia* and *giardia* are of particular concern nation wide (CDC, 1994 & 1999). Public health risks of waterborne disease are dependent on the level and types of microorganisms found in the watershed and the level of drinking water treatment (Rose, 1994). The presence of improperly disposed fecal waste and other types of pollution are also a concern to visitors accessing MDC/DWM lands. Recent surveys report that general public perception of water quality and their enjoyment of an area is most negatively affected by the presence of sewage contamination in or near the water or on the banks of the water (House, 1995). Finally, Massachusetts Surface Water Treatment Rule (310 CMR 22.20A) prohibits fecal waste, reuse, waste products and polluting liquid from being discharged directly or at any place from which the material may flow or be carried to the water supply or its tributary.

Table 7 - MDC/DWM Public Access Policy Summary, Ware River Watershed

MDC/DWM Public Access Policy Summary - Ware River Watershed			
Activity	Ware River Reservation	Ware River Off-Reservation	Ware River Intake
VEHICLE ACCESS			
Motorized			
Driving - vehicles registered for public roadways	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="radio"/>
Snowmobiling - MDC/DWM Designated trails only	<input type="checkbox"/> 2	<input type="checkbox"/> 2	<input type="radio"/>
Operating ATVs - dirt bikes, ORVs, etc.	<input type="radio"/> 3	<input type="radio"/> 3	<input type="radio"/> 3
Non-Motorized			
Bicycling - MDC/DWM Designated roads & trails only	<input type="checkbox"/> 4	<input type="checkbox"/> 4	<input type="radio"/>
FOOT ACCESS			
Bird Watching/Nature Study	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
Hiking/Walking/Snow-shoeing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
Cross-country Skiing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
Hunting & Trapping	<input type="checkbox"/> 5	<input type="checkbox"/> 5	<input type="radio"/>
Ice Fishing/Ice Skating	<input type="checkbox"/> 6	<input type="checkbox"/> 6	<input type="radio"/>
Shore Fishing	<input type="checkbox"/> 6	<input type="checkbox"/> 6	<input type="radio"/>
Fires & Cooking - includes gas grills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dog Walking - includes hunting with dogs	<input type="checkbox"/> 13	<input type="checkbox"/> 13	<input type="radio"/>
Horseback Riding - MDC/DWM Designated trails	<input type="checkbox"/> 14	<input type="checkbox"/> 14	<input type="radio"/>
WATER ACCESS			
Boating (motorized)	<input type="radio"/> 7	<input type="checkbox"/> 8	<input type="radio"/>
Boating (non-motorized)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
Swimming/Wading	<input type="checkbox"/> 9	<input type="checkbox"/> 10	<input type="radio"/>
Operating PWC (personal watercraft are jet skis)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
OTHER ACTIVITIES			
Overnight Camping	<input type="radio"/>	<input type="checkbox"/> 15	<input type="radio"/>
Organized Sports	<input type="checkbox"/> 11	<input type="checkbox"/> 11	<input type="radio"/>
Programs/Assemblies	<input type="checkbox"/> 12	<input type="checkbox"/> 12	<input type="radio"/>
Fishing Derbies	<input type="checkbox"/> 11	<input type="checkbox"/> 11	<input type="radio"/>
Trail Marking/Advertising	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Trail Clearing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Possessing Alcoholic Beverages	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Collecting/Metal Detecting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Target Shooting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	CHECK WITH MDC/DWM VISITOR CENTER		
LEGEND: <input type="radio"/> Prohibited; <input type="checkbox"/> Allowed with general restrictions (below); <input type="checkbox"/> # Allowed with specific restrictions			

☐ General public access on MDC/DWM lands is allowed through gates/barways in designated areas only. Any activity which injures or defaces the property of the Commonwealth is strictly prohibited. Night access is allowed on MDC/DWM lands in the Ware River Watershed. These policies are based on MDC regulations.

MDC/DWM Public Access Policy Summary Continued	
Specific Restrictions for Public Access on MDC/DWM Lands in the Ware River Watershed	
<input type="checkbox"/> 1	Registered motorized vehicles are those registered for operation on public ways. Their access is restricted to certain maintained MDC roads at open gates. Motorized vehicles are prohibited on MDC roads beyond closed gates or barways.
<input type="checkbox"/> 2	Snowmobiles are allowed with specific restrictions on MDC/DWM designated snowmobile trails only. Restrictions include season, snow depth, mph, etc.. MDC/DWM Designated Snowmobile Trail Map is available from the Quabbin Visitor Center, Ware River Field Office or MDC/DWM web site.
<input type="checkbox"/> 3	The operation of all-terrain vehicles is prohibited on MDC/DWM lands and roads.
<input type="checkbox"/> 4	Bicycling is allowed on MDC/DWM designated bicycle roads and trails and public roadways. Off-road bicycling and off-road trail riding is prohibited. Bicycling is prohibited during mud season when MDC/DWM roads and trails are closed by gates or signs. MDC/DWM Designated Bicycle Trail Map is available from the Quabbin Visitor Center, Ware River Field Office or on our web site listed below.
<input type="checkbox"/> 5	Hunting is allowed with a valid Massachusetts hunting license according to State regulations. State regulations prohibit hunting on Sundays.
<input type="checkbox"/> 6	Fishing access is allowed with a valid Massachusetts fishing license according to State regulations.
<input type="checkbox"/> 7	Motorboat use within waters of the Ware River Reservation (e.g., Whitehall Pond) is prohibited.
<input type="checkbox"/> 8	Motorboat access from MDC/DWM lands in the Ware River Off-Reservation is allowed with these restrictions. <ul style="list-style-type: none"> ➤ Motorboat access facilities (ramps) are provided only on MDC/DWM lands at the following locations: Brigham Pond, Demond Pond, Comet Pond, and Long Pond. ➤ Boat motor size off MDC/DWM ramps is limited to 20 hp(2 stroke) and 25 hp (4 stroke). ➤ MDC/DWM annually issues a limited number of <i>MDC/DWM Long Pond Access Permits</i> for boats with motors greater than 20 hp. This permit allows the holder to use a 20+ hp motor on Long Pond from Memorial Day to the last day in September and between 10 AM and 6 PM. Contact the Quabbin Visitor Center for more information.
<input type="checkbox"/> 9	Limited swimming access is allowed within a designated area of Rutland State Park, a DEM managed facility. See posted restrictions.
<input type="checkbox"/> 10	Limited swimming access is allowed in a designated area on Comet Pond, according to posted restrictions and during the designated season.
<input type="checkbox"/> 11	These activities are allowed only by written permission from the Superintendent, Quabbin Section
<input type="checkbox"/> 12	Groups up to 25 individuals are asked to notify the MDC/DWM prior to access on MDC/DWM lands. Groups exceeding more than 25 individuals or 15 horseback riders with horse (in the Ware River Watershed only), are required to submit a MDC/DWM Group Access Permit application at least 3 weeks prior to planned access. Contact Quabbin Visitor Center, Ware River Field Office, or MDC/DWM's web site for an access permit application
<input type="checkbox"/> 13	The MDC/DWM requests visitors to pickup and properly dispose of any fecal waste within 100' of a tributary or surface waters
<input type="checkbox"/> 14	Horseback riding access is allowed on MDC/DWM Designated Horseback Riding Roads and Trails only in the Ware River Watershed and according to specific restrictions (e.g., no riding during mud season, permit required for group rides of 15 or more, no watering of horses in tributaries, etc.) See Fact Sheet. MDC/DWM Designated Horseback Riding Roads and Trails Map is available from the Quabbin Visitor Center, Ware River Field Office and MDC/DWM web site.
<input type="checkbox"/> 15	Camping includes the use of tents, trailers, lean-tos, and motor homes. Camping access is prohibited with the Ware River Reservation. Limited camping on MDC/DWM Off-Reservation is allowed with written permission from the Superintendent only. Contact the Ware River Field office for more information (508) 882-3636
Contact information:	
<ul style="list-style-type: none"> ➤ Quabbin Visitor Center – Visit the Center at the Winsor Dam in Belchertown open 9-4:30 daily. (413) 323-7221 ➤ Ware River Field Office – Contact the MDC/DWM field staff at (508) 882-3636 ➤ MDC/DWM Watershed Rangers – Contact the Watershed Rangers at (413) 323-0191 ➤ Massachusetts State Police – Report violations/emergencies to the State Police at (413) 323-7561 (*SP) ➤ See MDC/DWM's Home Page – www.magnet.state.ma.us/mdc/water.htm 	

Key Implementation Strategies found in the updated Plan:

The MDC/DWM staff will implement the policies, control measures, activities, and programs cited in this Plan beginning in January 2000. In general, Plan implementation strategies will include the following seven action steps list below. A more detailed implementation strategy is located in Chapter 5 of the Plan.

- ◆ Maintaining and improving structural access controls, as needed;
- ◆ Monitoring, referral (when necessary), and corrective actions;
- ◆ Maintaining and refining a tracking system and electronic database to document threats, corrective actions taken, and current status;
- ◆ Providing educational programs and opportunities to promote watershed protection;
- ◆ Conducting Plan evaluation and program/plan modification, as necessary.
- ◆ Partnering initiatives with the Ware River Watershed Advisory Committee (WRWAC), State Police, state agencies, and others; and
- ◆ Implementing new programs to focus on signage and sanitary facilities.

PART I - VEHICLE ACCESS

Driving

Policy Summary:

Activity	Ware River Reservation	Ware River Off-Reservation	Ware River Intake - Restricted Area
Driving	Allowed with specific and general restrictions	Allowed with specific and general restrictions	Prohibited

MDC/DWM Driving Policy:

MDC/DWM allows driving with registered motorized vehicles on the Division's maintained roads. The Division's maintained roads are those roads that pass through MDC/DWM's open gates and open barways and within MDC/DWM water supply lands in the Ware River watershed (see **Figure 11**). Vehicle access is prohibited if the road is posted closed, blocked, or if the road passes through a closed/locked gate or barway. MDC/DWM prohibits registered motorized vehicles from driving on maintained roads through gates or barways which are either locked or closed, except under certain situations with a MDC/DWM access permit (e.g., for watershed maintenance). Army Corps of Engineers may request that Division roads be periodically closed for flood control purposes.

MDC/DWM General Public Access Policy:

Public access must only be through MDC/DWM gates or other MDC/DWM designated entrances. MDC/DWM allows public access on MDC/DWM owned lands in the Ware River Watershed System at night. For more information, please contact the Quabbin Visitor Center at (413) 323-7221, the Ware River Field Office at (508) 882-3636, or the MDC/DWM Watershed Rangers (413) 323-0191.

Discussion:

The MDC/DWM recognizes that many local residents and visitors enjoy driving for sight seeing purposes. The MDC/DWM allows limited vehicular access on the Division's maintained roads passing through open gates and barways in the Ware River watershed. However, MDC/DWM prohibits driving off of maintained roads or on roads behind closed or locked gates and barways.

Mechanisms for Control:

- Monitor authorized use for intensity and impacts.
- Increase enforcement of unauthorized vehicular use.
- Evaluate and modify MDC/DWM's access permit system

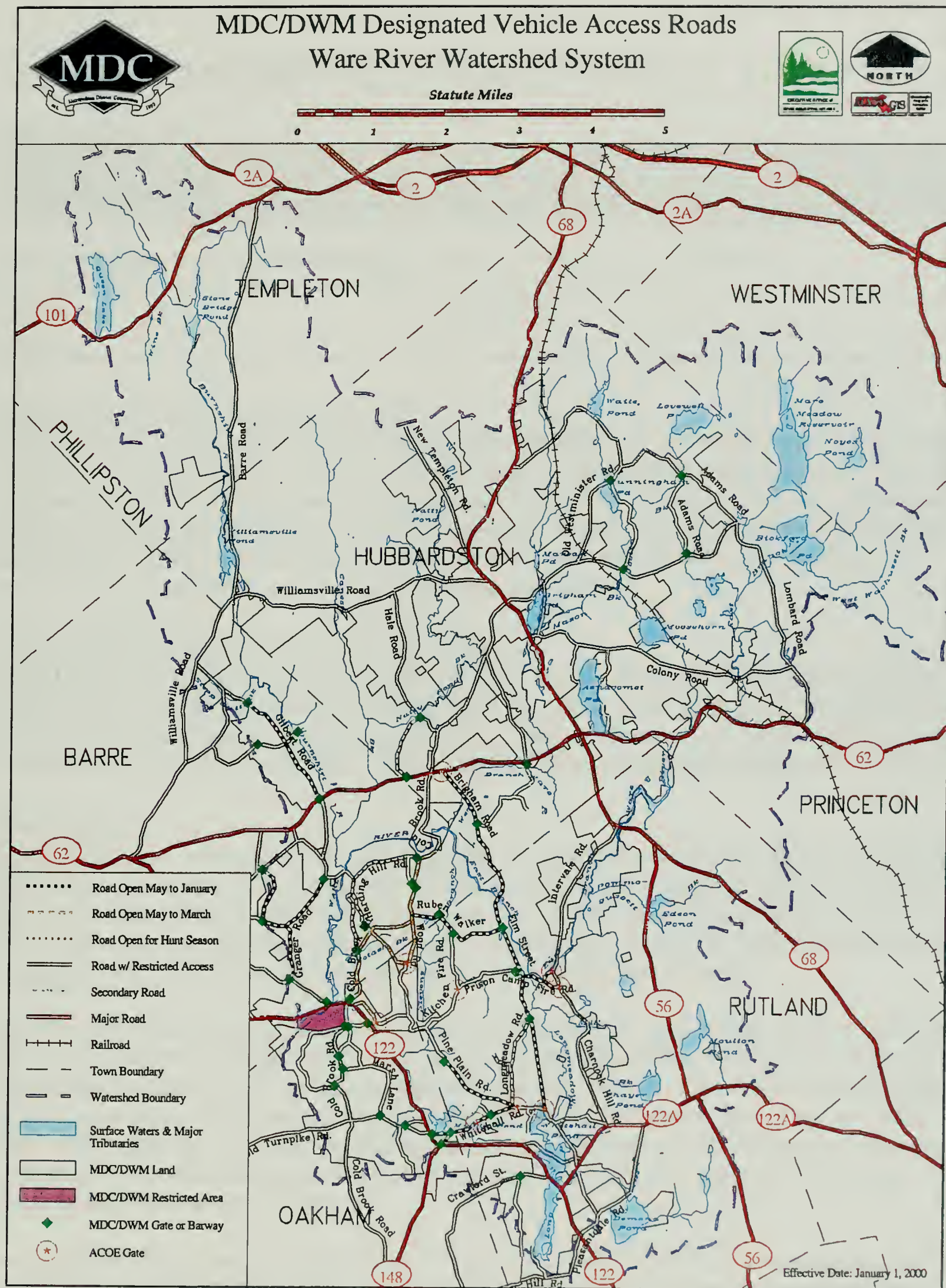


Figure 11 - MDC/DWM Designated Vehicle Access Roads - Ware River Watershed

Snowmobiling on MDC/DWM Designated Trails

Policy Summary:

Activity	Ware River Reservation	Ware River Off-Reservation	Ware River Intake - Restricted Area
Snowmobiling on MDC/DWM designated trails	Allowed with specific and general restrictions	Allowed with specific and general restrictions	Prohibited

MDC/DWM Snowmobiling Policy:

MDC/DWM allows limited snowmobiling with restrictions on MDC/DWM designated trails in the Ware River watershed. MDC/DWM has mapped these designated trails (see **Figure 12**). Existing snowmobile access restrictions are as follows: a minimum of 6" of snow coverage on a designated trail is required for access; access is allowed only after December 31, and access speed is restricted to MDC/DWM's 20 mph speed limit on all MDC/DWM roads. All applicable state and local regulations and restrictions related to snowmobiling also apply.

MDC/DWM General Public Access Policy:

Public access must only be through MDC/DWM gates or other MDC/DWM designated entrances. MDC/DWM allows public access on MDC/DWM owned lands in the Ware River Watershed System at night. For more information, please contact the Quabbin Visitor Center at (413) 323-7221, the Ware River Field Office at (508) 882-3636, or the MDC/DWM Watershed Rangers (413) 323-0191.

Discussion:

MDC/DWM limits public access for snowmobiling on Division owned lands within the Ware River Off-Reservation and the Ware River Reservation according to the Watershed Protection regulations (350 CMR 11.00). The Division does not promote snowmobile access. Based on past practices, MDC/DWM has reviewed trail locations and re-designated limited trails for snowmobile use on its land in the Ware River watershed to better protect water quality (see **Table 8**).

MDC/DWM's snowmobiling policy is based in part on input from local groups, advisory committees, and the general public. Some support the trail system as an opportunity for outdoor recreation for local residents. Others prefer natural settings free from the intrusion of motorized vehicles and the noise of the engines. Opinions regarding snowmobile use also vary: some people see no conflict on trails, while others do. A local snowmobile club has stated its desire for through-trails to connect with other trail systems throughout the state, including DEM's Penn-Central Rail Trail, which currently allows snowmobile access.

Because MDC/DWM staff have documented frequent snowmobile traffic on non-designated trails on MDC/DWM lands in the Ware River watershed, the MDC/DWM will increase monitoring and enforcement efforts along designated snowmobile trails in the Ware River watershed. Snowmobiling also increases the likelihood of accidents causing fuel contamination, littering in remote locations, introduction of human fecal wastes, and air pollution.

Table 8 - 1988 vs. 1999 MDC/DWM Designated Snowmobile Roads and Trails

	1988 MDC/DWM Designated Trails for Snowmobiling	1999 Public Input, Designated Trails for Snowmobiling	2000 MDC/DWM Designated Trails for Snowmobiling
Total Mileage	39.7 miles	51.8 miles	45.4 miles
➤ MDC/DWM lands	16.4 miles	46.1 miles	22.0 miles
➤ ACOE lands	0.8 miles	4.1 miles	0.9 miles
➤ DEM lands	22.5 miles	NA	22.5 miles
➤ Town roads	NA	NA	NA
➤ Other	NA	1.6 miles	NA

Source: (P. Lamothe, 12/14/99); NA = not available

MDC/DWM has had difficulties in preventing unauthorized trail use because of the lack of adequate trail markings. MDC/DWM's new sign plan will help to eliminate confusing or missing trail markings. All MDC/DWM designated snowmobile trails will be clearly marked with a blue diamond-shaped marker. MDC/DWM prohibits snowmobile riding on all other trails. The MDC/DWM Watershed Rangers and other staff will work together to monitor this activity and enforce this policy.

Finally, MDC/DWM designated trails for snowmobile access is in accordance with the 1994 Massachusetts Watershed Protection Regulation, 350 CMR 11.09 2(a)(12), which states: "...Recreational vehicles are prohibited on all Watershed System property except the use of snowmobiles in areas designated by the Commission or its designee..." MDC/DWM's snowmobiling policy has been updated since 1988 with improved and re-designated trail locations, trail conditions restrictions, and a new trail marking program.

Mechanisms for Control:

- Document public use and intensity of authorized and unauthorized snowmobile access and secondary impacts at critical locations.
- Continue to pursue prosecution of regulatory violations.
- Increase public outreach and education (e.g., snowmobile clubs).
- Monitor for illegal trail clearing, expansion, or widening near private property boundaries.

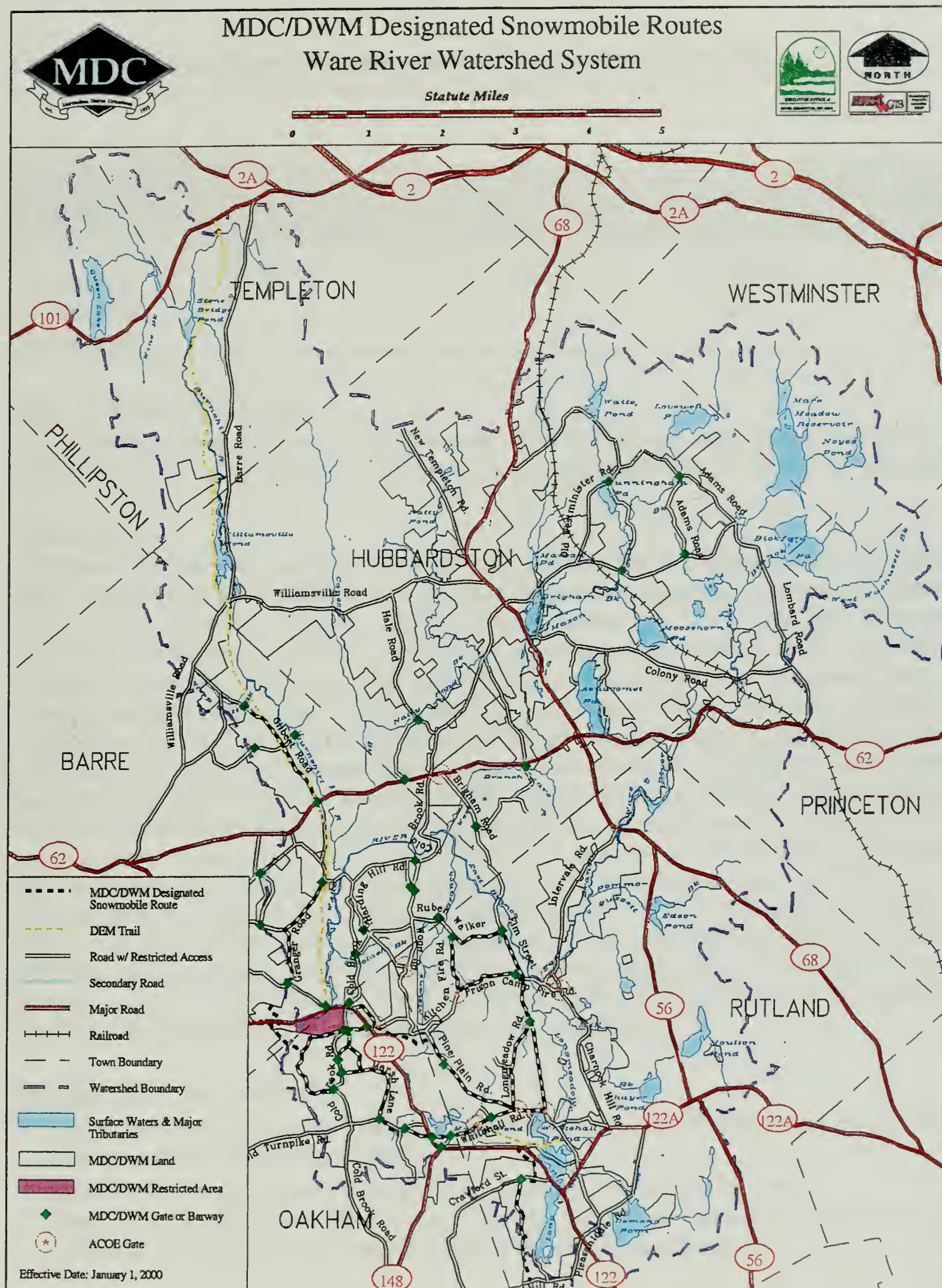


Figure 12 - MDC/DWM Designated Snowmobile Routes - Ware River Watershed

Operating All Terrain Vehicles (ATV's), Dirt Bikes, etc.

Policy Summary:

Activity	Ware River Reservation	Ware River Off-Reservation	Ware River Intake - Restricted Area
Operating ATVs, Dirt Bikes, etc.	Prohibited	Prohibited	Prohibited

MDC/DWM ATV Policy:

MDC/DWM prohibits the operation of all-terrain vehicles, dirt bikes, and all other motorized vehicles, on roads, on trails, or off trails, throughout Division lands in the Ware River watershed.

Discussion:

ATV's and dirt bikes are prohibited from operating on public roads in Massachusetts. Consequently, ATV's and dirt bike riders are often attracted to Division lands, especially to power line right-of ways, where unauthorized riding is prohibited. The operation of ATV's and dirt bikes is prohibited on all MDC/DWM lands. Staff have documented unauthorized trails created by the prohibited operation of all-terrain vehicles and dirt bikes on Division lands in the Ware River watershed. Unauthorized trail creation and unbridged stream crossings cause erosion, which has increased sediment and nutrient input to the tributaries. Off-road driving and accidents can introduce fuels and other hazardous materials onto water supply lands. These hazardous materials can end up directly in the public water supply of the Ware River, or indirectly through its tributaries. Off-road driving also increases the likelihood of unmanaged trash and human fecal waste disposal in the more remote locations where normal controls (e.g., sani cans and trail monitoring) are difficult to implement. MDC's Watershed Protection regulations prohibit off-road motorized driving. The 1994 Massachusetts Watershed Protection Regulation (350 CMR 11.09 2(a)(12)) states: "No Person shall drive a motorized vehicle within the Watershed System except upon roads authorized for such use by the Commission or its designee. Recreational vehicles are prohibited on all Watershed System property except the use of snowmobiles in areas designated by the Commission or its designee..." MDC/DWM's current policy remains the same as the 1988 policy.

Mechanisms for Control:

- Coordinate enforcement activities between Watershed Rangers, Environmental Police Officers, MA State Police, and NEES security.
- Increase weekend surveillance and public education efforts by Division staff.
- Improve and maintain MDC/DWM signs notifying the public of restrictions and prohibited activities, including violation reporting and emergency contact numbers.

Bicycling on MDC/DWM Designated Roads

Policy Summary:

Activity	Ware River Reservation	Ware River Off-Reservation	Ware River Intake - Restricted Area
Bicycling on MDC/DWM Designated Roads and Trails	Allowed with specific and general restrictions	Allowed with specific and general restrictions	Prohibited

MDC/DWM Bicycling Policy:

MDC/DWM allows bicycling on MDC/DWM designated roads within MDC/DWM water supply lands in the Ware River watershed (see **Figure 13**). MDC/DWM prohibits off-road bicycling, bicycling on any footpaths, bicycling on forestry operation's skid roads, and bicycling on unauthorized roads or trails. In addition, MDC/DWM restricts bicycling during "mud-season" (April-May) when MDC/DWM closes gates or barways, during watershed management operations, and during other situations, which are posted.

MDC/DWM General Public Access Policy:

Public access must only be through MDC/DWM gates or other MDC/DWM designated entrances. MDC/DWM allows public access on MDC/DWM owned lands in the Ware River Watershed System at night. For more information, please contact the Quabbin Visitor Center at (413) 323-7221, the Ware River Field Office at (508) 882-3636, or the MDC/DWM Watershed Rangers (413) 323-0191.

Discussion:

Currently the MDC/DWM regulates public access for bicycling on Division owned lands within the Ware River watershed. Prior to 1994, MDC/DWM did not regulate bicycle access on MDC/DWM lands in the Ware River Watershed. In 1988, the Division limited bicycles to designated roads within MDC/DWM lands in the Quabbin Reservoir watershed due to the growing popularity of bicycling off of paved roads (i.e., mountain biking). Bicycling was not limited, at that time, in the Ware River watershed. Since 1988, technological developments in bicycle design have changed the way cyclists use Division watershed lands. Wider, more aggressive tread patterns and off-road handling improvements allow access off of maintained roads and onto trails or off-trails. Therefore, to prevent the proliferation of individual trails, the Division will control and guide bicycling by allowing bike riding only on designated, maintained roadways. MDC/DWM specifically prohibits bicycling on pedestrian footpaths and skid roads designed for temporary watershed management operations. The Division prohibits off-road bicycling on MDC/DWM lands in both the Reservation and Off-Reservation areas. MDC/DWM restricts bicycling during mud season (when the gates are closed) and within forestry operations.

MDC/DWM limits and controls bicycling due to the increasing biking capabilities and popularity of mountain biking. Bicycling can cause erosion on trails, and be a safety hazard to pedestrians on pedestrian trails. Thus, MDC/DWM also wants to prevent further recreational expansion of this activity in accordance with MDC/DWM's Master Policy for Public Access - Ware River Watershed System. Bicycle use within MDC/DWM designated areas is allowed according to the 1994

Massachusetts Watershed Protection Regulation, 350 CMR 11.09(2)(a)(14), which states that: “The use of bicycles, skis and other means of non-motorized transportation within the Watershed System shall be permitted only in areas designated by the Commission or its designee.” MDC/DWM’s bicycling policy has been updated to clarify that the designated areas for bicycling are MDC/DWM maintained roads through open gates or barways within the Ware River watershed.

Mechanisms for Control:

- Monitor authorized use for intensity and impacts
- Increase enforcement of unauthorized use, if necessary

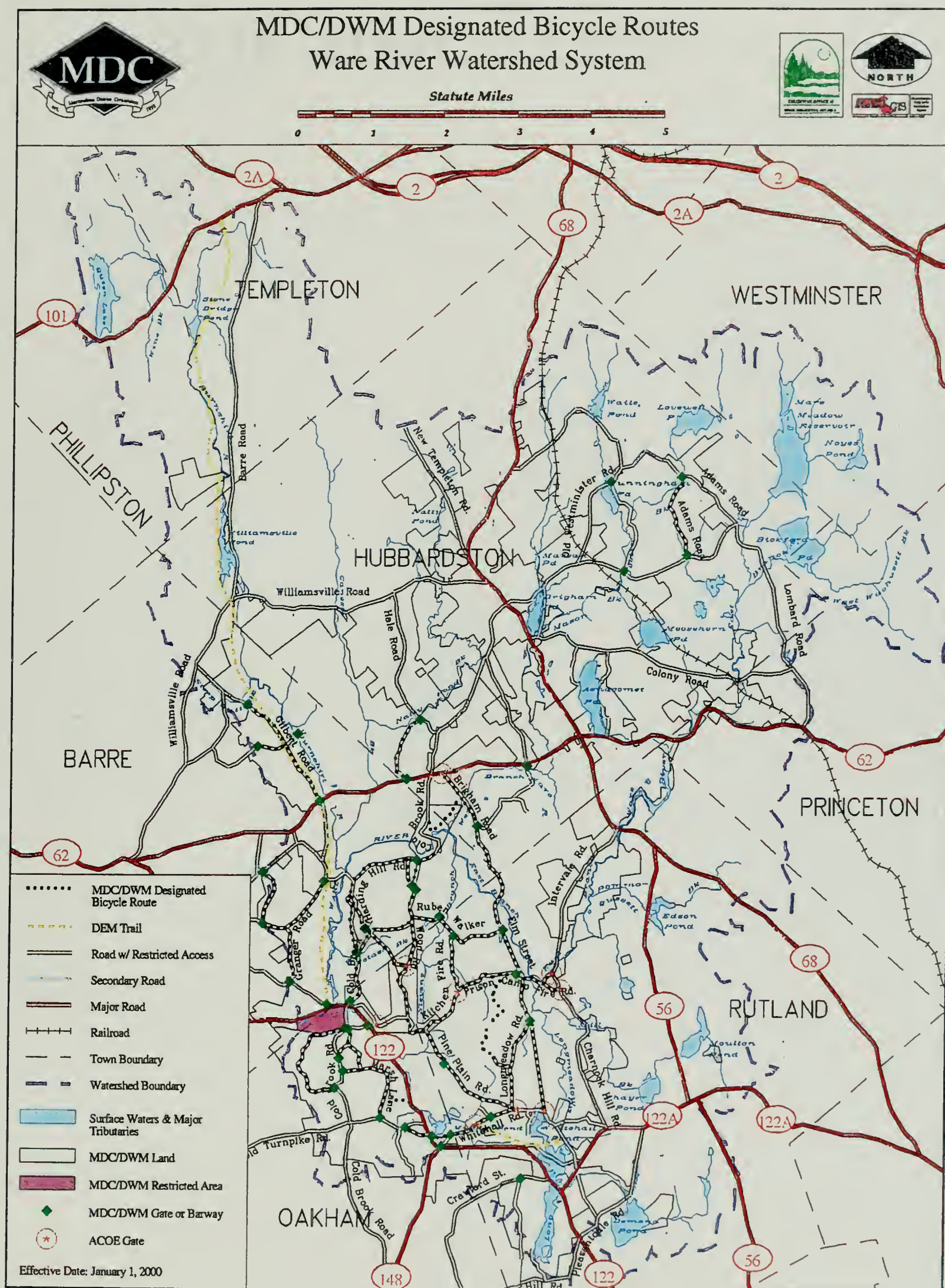


Figure 13 - MDC/DWM Designated Bicycle Routes - Ware River Watershed

PART II – FOOT ACCESS

Bird Watching/Nature Study

Policy Summary:

Activity	Ware River Reservation	Ware River Off-Reservation	Ware River Intake - Restricted Area
Bird Watching/ Nature Study	Allowed with general restrictions	Allowed with general restrictions	Prohibited

MDC/DWM Bird Watching/Nature Study Policy:

MDC/DWM allows bird watching and nature study with restrictions on MDC/DWM water supply lands for noncommercial activities. Bird watching and nature study activities are prohibited in the Restricted Area of the Ware River Intake. MDC/DWM restricts bird watching and nature study according to MDC/DWM's general public access policy.

MDC/DWM General Public Access Policy:

Public access must only be through MDC/DWM gates or other MDC/DWM designated entrances. MDC/DWM allows public access on MDC/DWM owned lands in the Ware River Watershed System at night. For more information, please contact the Quabbin Visitor Center at (413) 323-7221, the Ware River Field Office at (508) 882-3636, or the MDC/DWM Watershed Rangers (413) 323-0191.

Discussion:

Bird watching and nature study, like hiking, is currently allowed on water supply lands with restrictions, given the diffuse nature of the activity. This activity is restricted since, as with all other human activities, there is potential for adverse human impacts caused by improperly disposed trash and fecal waste, which could affect water quality, especially in the Restricted Area around the Ware River Intake.

Mechanisms for Control:

- Monitor and evaluate group access impacts related to nature study and birdwatching.

Day Hiking, Walking, and Snowshoeing

Policy Summary:

Activity	Ware River Reservation	Ware River Off-Reservation	Ware River Intake - Restricted Area
Day Hiking, Walking, and Snowshoeing	Allowed with general restrictions	Allowed with general restrictions	Prohibited

MDC/DWM Day Hiking, Walking, and Snowshoeing Policy:

MDC/DWM allows day hiking, walking, or snowshoeing with restrictions within MDC/DWM's water supply lands in the Ware River watershed. MDC/DWM prohibits hiking, walking, and snowshoeing access and activities in the Restricted Area of the Ware River Intake. There are additional specific rules and policies regarding dog walking (please see Dog Walking Fact Sheet). MDC/DWM allows hiking, walking, or snowshoeing according to MDC/DWM's general access policy below.

MDC/DWM General Public Access Policy:

Public access must only be through MDC/DWM gates or other MDC/DWM designated entrances. MDC/DWM allows public access on MDC/DWM owned lands in the Ware River Watershed System at night. For more information, please contact the Quabbin Visitor Center at (413) 323-7221, the Ware River Field Office at (508) 882-3636, or the MDC/DWM Watershed Rangers (413) 323-0191.

Discussion:

MDC/DWM prohibits day hiking, walking, and snowshoeing access at the Ware River Intake area to protect the drinking water quality from the possible contamination by improperly disposed human fecal waste and trash. The Watershed Protection Regulation, 350 CMR 11.09(2)(a)(9), states: "the use of bicycles, skis, and other means of non-motorized transportation within the Watershed System shall be permitted only in areas designated by the Commission or its designee." The Massachusetts Watershed Protection Regulation, 350 CMR 11.09 (2)(a)(1) states: "Entrance on or exit from land of the Watershed System shall be made through gates or other designated areas."

Mechanisms for Control:

- Monitor and evaluate the frequency and intensity of public use of Division lands for hiking, walking, and snowshoeing in the Ware River watershed.

Cross-country Skiing

Policy Summary:

Activity	Ware River Reservation	Ware River Off-Reservation	Ware River Intake - Restricted Area
Cross-country skiing	Allowed with general restrictions	Allowed with general restrictions	Prohibited

MDC/DWM Cross-country Skiing Policy:

MDC/DWM allows cross-country skiing within MDC/DWM's water supply lands in the Ware River watershed according to MDC/DWM's general access policy below. MDC/DWM prohibits cross-country skiing in the Restricted Area of the Ware River Intake.

MDC/DWM General Public Access Policy:

Public access must only be through MDC/DWM gates or other MDC/DWM designated entrances. MDC/DWM allows public access on MDC/DWM owned lands in the Ware River Watershed System at night. For more information, please contact the Quabbin Visitor Center at (413) 323-7221, the Ware River Field Office at (508) 882-3636, or the MDC/DWM Watershed Rangers (413) 323-0191.

Discussion:

MDC/DWM prohibits cross-country skiing in areas with close access to its reservoirs in the Quabbin Reservoir and Wachusett Reservoir watersheds because skiers are drawn to shorelines and, often times, try to cross frozen water, which is unsafe, due to the daily fluctuating water levels. In comparison, MDC/DWM allows cross-country skiing in the Ware River watershed because there is not a large, open body of water to attract users.

MDC/DWM's Master Policy for Public Access prohibits new recreational activities that may conflict with public water supply priorities and values. The Massachusetts Watershed Protection Regulation, 350 CMR 11.09(2)(a)(14) states: "The use of bicycles, skis and other means of nonmotorized transportation within the Watershed System shall be permitted only in areas designated by the Commission or its designee." The Ware River watershed, excluding the Restricted Area of the Ware River Intake, is MDC/DWM's designated area for cross-country skiing. MDC/DWM's cross-country skiing policy has been clarified regarding the designated areas where cross-country skiing is both allowed and prohibited.

Mechanisms for Control:

- Increase public education and outreach efforts.
- Monitor for contaminants near parking lots.

Hunting and Trapping

Policy Summary:

Activity	Ware River Reservation	Ware River Off-Reservation	Ware River Intake - Restricted Area
Hunting and Trapping	Allowed with general restrictions	Allowed with general restrictions	Prohibited

MDC/DWM Hunting and Trapping Policy:

MDC/DWM allows hunting and trapping within MDC/DWM water supply lands in the Ware River watershed excluding the Restricted Area of the Ware River Intake, according to MDC/DWM's general public access policy and the guidelines below (based on 350 CMR 8.02):

- Do not wash hands or animals in streams or ponds.
- No animal parts may be disposed of within 100' of wetlands, streams, brooks, ponds or other water body.
- Use sani-cans.

In addition, all other applicable state, local, and federal rules and regulations apply.

MDC/DWM General Public Access Policy:

Public access must only be through MDC/DWM gates or other MDC/DWM designated entrances. MDC/DWM allows public access on MDC/DWM owned lands in the Ware River Watershed System at night. For more information, please contact the Quabbin Visitor Center at (413) 323-7221, the Ware River Field Office at (508) 882-3636, or the MDC/DWM Watershed Rangers (413) 323-0191.

Discussion:

MDC/DWM has historically allowed recreational hunting and trapping activities within areas of the Ware River Watershed System. The Massachusetts Watershed Protection Regulation, 350 CMR 11.09(2)(a)(22), states: "No Person may hunt, shoot or trap animals on or within any Watershed System property except at times and in areas designated by the Commission or its designee."

MDC/DWM land within the Ware River watershed, excluding the Restricted Area of the Ware River Intake, is the designated area for hunting and trapping. MDC/DWM has issued MassWildlife a permit allowing them to manage a Wildlife Management Area in Hubbardston, MA, on land owned by MDC/DWM; and hunting and trapping is permitted there. The MDC/DWM's policy has been clarified regarding designated areas for hunting and trapping and has been updated to reflect the new general public access policies regarding designated times of access.

Mechanisms for Control:

- Coordinate with the MA State Police and Environmental Police Officers
- Maintain and increase public education.

Ice Fishing and Ice Skating

Policy Summary:

Activity	Ware River Reservation	Ware River Off-Reservation	Ware River Intake - Restricted Area
Ice Fishing and Ice Skating	Allowed with general restrictions	Allowed with general restrictions	Prohibited

MDC/DWM Ice Fishing and Ice Skating Policy:

MDC/DWM allows ice fishing and ice skating access from MDC/DWM's water supply lands in the Ware River watershed excluding the Restricted Area of the Ware River Intake, and according to MDC/DWM's general public access policy below. In addition, all other applicable state, local, and federal rules and regulations apply to these activities.

MDC/DWM General Public Access Policy:

Public access must only be through MDC/DWM gates or other MDC/DWM designated entrances. MDC/DWM allows public access on MDC/DWM owned lands in the Ware River Watershed System at night. For more information, please contact the Quabbin Visitor Center at (413) 323-7221, the Ware River Field Office at (508) 882-3636, or the MDC/DWM Watershed Rangers (413) 323-0191.

Discussion:

MDC/DWM allows limited ice fishing and ice skating activities on ponds and lakes within the Ware River watershed according to historical uses. The Watershed Protection Regulation, 350 CMR 11.09(2)(a)(9), states: "the use of bicycles, skis, and other means of non-motorized transportation within the Watershed System shall be permitted only in areas designated by the Commission or its designee." MDC/DWM's revised policy clarifies the previous policy.

Mechanisms for Control:

- Increase winter surveillance and monitoring of these activities.

Shore Fishing

Policy Summary:

Activity	Ware River Reservation	Ware River Off-Reservation	Ware River Intake - Restricted Area
Shore Fishing	Allowed with general restrictions	Allowed with general restrictions	Prohibited

MDC/DWM Shore Fishing Policy:

MDC/DWM allows shore fishing from MDC/DWM's water supply lands of the Ware River Watershed, except for the Restricted Area of the Ware River Intake, according to the MDC/DWM's general public access policy below. In addition, all other applicable local, state, and federal rules and regulations apply to these activities.

MDC/DWM General Public Access Policy:

Public access must only be through MDC/DWM gates or other MDC/DWM designated entrances. MDC/DWM allows public access on MDC/DWM owned lands in the Ware River Watershed System at night. For more information, please contact the Quabbin Visitor Center at (413) 323-7221, the Ware River Field Office at (508) 882-3636, or the MDC/DWM Watershed Rangers (413) 323-0191.

Discussion:

MDC/DWM allows shore fishing from MDC/DWM's water supply lands in the Ware River watershed. The MDC/DWM shore fishing policy is a clarification of MDC/DWM's former policy.

Mechanisms for Control:

- Monitor shorelines for water quality impacts including illegally disposed waste.
- Evaluate "Sani-Can" program.

Fires and Cooking

Policy Summary:

Activity	Ware River Reservation	Ware River Off-Reservation	Ware River Intake - Restricted Area
Fires	Prohibited	Prohibited	Prohibited

MDC/DWM Fire/Cooking Policy:

MDC/DWM prohibits fires and cooking, including the use of gas grills throughout MDC/DWM water supply lands in the Ware River Watershed System.

Discussion:

Fires and cooking are prohibited because forest fires in the MDC/DWM System have been identified as originating from camping fires. In addition, the prohibition of fires and cooking is required by the Watershed Protection Regulation, 350 CMR 11.09 (2)(a)(6) that states: "Cooking and all fires are prohibited within the Watershed System." This regulation was updated in 1994 to address both cooking and the observation of illegal fire pits on Division lands in the Ware River watershed.

Mechanisms for Control:

- Focus surveillance and enforcement in known areas of regulatory violation.

Dog Walking (includes hunting with dogs)

Policy Summary:

Activity	Ware River Reservation	Ware River Off-Reservation	Ware River Intake - Restricted Area
Dog Walking (including hunting with dogs)	Allowed with specific and general restrictions	Allowed with specific and general restrictions	Prohibited

MDC/DWM Dog Walking Policy:

MDC/DWM allows limited dog walking within MDC/DWM's water supply lands with specific and general restrictions. Two specific restrictions, based on existing State drinking water regulations (310 CMR 22.00), relate to proper fecal matter disposal and restricting animals from entering the source water supply:

- Proper removal and disposal (e.g., burial at least 100 feet from a water source (to inhibit the matter from being carried to or washed into the source water)) of animal fecal waste (310 CMR 22.20B(3)).
- Animals cannot go into the waters of the water source in the Ware River Watershed System (310 CMR 22.20B(7)).

The MDC/DWM's general public access policy restrictions also apply to dog walking on MDC/DWM lands in the Ware River watershed. All other domesticated animals (excluding horses) are prohibited on MDCC/DWM's lands in the Ware River watershed. All dogs are prohibited from the Restricted Area of the Ware River intake.

MDC/DWM General Public Access Policy:

Public access must only be through MDC/DWM gates or other MDC/DWM designated entrances. MDC/DWM allows public access on MDC/DWM owned lands in the Ware River Watershed System at night. For more information, please contact the Quabbin Visitor Center at (413) 323-7221, the Ware River Field Office at (508) 882-3636, or the MDC/DWM Watershed Rangers (413) 323-0191.

Discussion:

The presence of dogs and other pets within a public drinking water supply watershed, especially near its surface waters, is incompatible with MDC/DWM's water quality and public health protection goals. Dogs pose a risk to water quality because they have been identified as carriers of *C. parvum*, a protozoan parasite dangerous to human health. As carriers, dogs and cats may contribute diffuse, but substantial quantities of oocysts to runoff into source waters. Further, these microbiological pathogens cause waterborne diseases that can infect humans, and can be spread by infecting resident wildlife populations. *Giardia lamblia* is another protozoan pathogen also found in animal feces, and dangerous to human health. *Cryptosporidium* can cause a prolonged fever and diarrhea, and may kill persons with weak immune systems. Because this parasite is resistant to chemical disinfectants, MDC/DWM's watershed protection efforts to prevent its introduction at the source of the drinking water supply system are extremely important.

With the promulgation of the IESWTR under the 1996 Safe Drinking Water Act Amendments, US EPA is establishing a maximum contaminant level of zero for *Cryptosporidium* for filtered and unfiltered systems. In addition, EPA is extending the watershed control requirements for unfiltered systems to include the control of cryptosporidium. This new requirement builds on the existing federal regulations for *Giardia lamblia* and viruses. Further, as a condition of primacy, the federal government is requiring the State, to describe how it will judge the adequacy of watershed control programs for *Cryptosporidium*, *Giardia lamblia*, and viruses.

Finally, the MDC's Watershed Protection Regulation, 350 CMR 11.09 (2)(a)(13), states: "No Person shall bring any animal within any Watershed System property except for horses and dogs in the Ware River Watershed at areas designated by the Commission or its designee." MDC/DWM's policy has been updated to reflect new state and federal regulations related to drinking water protection.

Mechanisms for Control:

- Monitor for concentrated populations of domesticated animals
- Target surveillance efforts near waterbodies.
- Develop appropriate enforcement actions for illegal activities related to domesticated animals.
- Continue to monitor for microbiological and water quality impacts due to the presence of dogs and other domesticated animals and amend policy accordingly.

Horseback Riding

Policy Summary:

Activity	Ware River Reservation	Ware River Off-Reservation	Ware River Intake - Restricted Area
Horseback riding on MDC/DWM lands	Allowed with specific and general restrictions	Allowed with specific and general restrictions	Prohibited

MDC/DWM Horseback Riding Access Policy:

MDC/DWM prohibits horseback riding within all its water supply lands except in the Ware River watershed, (excluding the Restricted Area of the Ware Intake) on roads and trails specifically designated for horseback riding access, and according to specific restrictions. MDC/DWM allows horseback riding on MDC/DWM designated roads and trails on Division lands in the Ware River watershed, with specific and general restrictions (see **Figure 14**). This map supercedes all other trail maps.

Specific restrictions for horse access on Division land are:

- I. All riders including a group of less than fifteen (horse with rider is considered "one"):
 - Horse feces within sight of any tributary or surface water (e.g., pond) must be removed or buried.
 - Horse wading in, watering in, or disposal of any waste in or adjacent to a tributary or surface water is prohibited.
 - Riding is allowed on MDC/DWM designated road or trail only.
 - Horseback riding is prohibited during "mud season" (March-April) when all MDC/DWM roads and trails are closed for access. Please contact MDC/DWM, if in doubt.
 - Horseback riding for commercial purposes on state land is prohibited.
- II. Group of fifteen to fifty horses with riders⁴:
 - Organized rides for groups of fifteen or more require a MDC/DWM group access permit (contact the Ware River Field Office or Quabbin Visitor Center). A permit application is found in Appendix F.
 - MDC/DWM will allow no more than 50 riders at one time with this type of access permit.
 - Group permit conditions regarding trail access, manure management, signage, etc. may also apply.
 - As a rule of thumb, submit your access permit application at least two weeks in advance.
- III. Group of greater than fifty and less than one hundred:
 - Access for organized rides for a group greater than fifty and less than one hundred requires a special group/activity permit. See Appendix F for permit application.
 - Case-by-case access restrictions will apply to this activity. At minimum, restrictions will include 1) MDC/DWM approved designated route; 2) Manure management requirements; and 3) information regarding watering stations.

⁴ MDC/DWM's threshold for group rides of fifty or less is based on Division permit applications records. All group access permit applications for horseback riders between 1997-1999 were all less than fifty, with one exception, a request for sixty riders.

MDC/DWM may restrict this regulated activity immediately in the interest of public health protection.

MDC/DWM General Public Access Policy:

Public access must only be through MDC/DWM gates or other MDC/DWM designated entrances. MDC/DWM allows public access on MDC/DWM owned lands in the Ware River Watershed System at night. For more information, please contact the Quabbin Visitor Center at (413) 323-7221, the Ware River Field Office at (508) 882-3636, or the MDC/DWM Watershed Rangers (413) 323-0191.

Discussion:

Unrestricted horseback riding within a public drinking water supply watershed, especially near its surface waters, is incompatible with MDC/DWM's water quality and public health protection goals. *Cryptosporidium* and *Giardia lamblia*, two protozoa pathogens that can sometimes be found in horse feces, are dangerous to human health when they enter drinking water. *Cryptosporidium* can cause a prolonged fever and diarrhea, and may kill persons with weak immune systems. Because this parasite is resistant to chemical disinfectants, MDC/DWM's watershed protection efforts to prevent its introduction at the source of the drinking water supply system are extremely important.

State and Federal surface water protection regulations restrict horse access on public drinking water supply lands and waters to safeguard the quality of the public's drinking water supplies (e.g., 310 CMR 22.20B(2)(b) and IESWTR). The MDC/DWM's horseback riding access policy is based on recent amendments to Federal and State regulations for drinking water protection, the increasing popularity of recreational horseback riding in Central Massachusetts, the cumulative effects of horse access, and the dynamic nature of scientific research on waterborne diseases. The Division's policy allows opportunities, given past practices and public input, for horseback riding on designated roads and trails in the Ware River watershed, yet is adequate to restrict microbiological contamination to the drinking water supply source waters (see **Table 9**).

Federal drinking water regulations are concerned with recreational horseback riding in unfiltered supply watersheds. With the promulgation of the IESWTR under the 1996 Safe Drinking Water Act Amendments, EPA is establishing a MCL of zero for *Cryptosporidium* for all drinking water supply systems. In addition, EPA is extending the watershed control requirements for unfiltered systems to include the control of *Cryptosporidium*. This new requirement builds on the existing federal regulations for *Giardia lamblia* and viruses. Furthermore, as a condition of primacy, the federal government is requiring the State to describe how it will judge the adequacy of watershed control programs for *Cryptosporidium*, *Giardia lamblia*, and viruses.

In the Ware River watershed communities the popularity of horse ownership and the presence of commercial equestrian stables in the area have increased between 1989 and 1999. MDC/DWM's restriction of horse access near water resources in drinking water supply watersheds is necessary to minimize potential sources of microbial contamination from the increasing popularity of recreational horseback riding on public lands in Central Massachusetts. There already is some surface water contamination from horses in the Ware River watershed. MDC/DWM's water quality sampling downstream from small horse pastures on private lands in the watershed have found significantly elevated fecal bacteria levels at four different sites tested, as well as two presumed positive tests for *Giardia lamblia*.

The variety of water quality effects of horseback riding include:

- the improper disposal of sanitary wastes from horses and their riders and the resulting threat of microbiological contamination;
- an increase in the number of horses and riders on limited trails, as well as the frequency of use;
- an increase in the sediment/nutrient inputs caused by large numbers riding on trails, riding off trails, or riding on closed trails; and
- the attraction of wading or watering a horses in nearby, off-trail surface waters or tributaries to the drinking water supply.

Individually and collectively these effects increase the potential for the introduction of waterborne disease pathogens into the municipal public drinking water supply source.

Table 9 - 1988 vs. 1999 MDC/DWM Designated Horseback Riding Roads and Trails

	1988 MDC/DWM Designated Trails for Horseback Riding	1999 Public Input, Designated Trails for Horseback Riding	2000 MDC/DWM Designated Horseback Riding Roads and Trails
Total Mileage	49.6 miles	75.7 miles	64.2 miles
MDC/DWM lands	22.6 miles	48.6 miles*	37.8 miles
ACOE lands	3.6 miles	4.6 miles	3.9 miles
DEM lands	22.5 miles	22.5 miles	22.5 miles
Town roads	0.9 miles	NA	NA

Source: (Lamothe, 12/14/99) *Does not include request for complete access to all MDC/DWM drinking water supply lands in the Ware River watershed. See Appendix E for 1988 & 1999 maps on which the 2000 map was based. NA = not available.

Table 9 shows the increasing demand and pressure for increasing miles of horseback riding trail access on drinking water supply lands in the Ware River watershed over the past ten years. The first MDC/DWM designated horseback riding trails were created in 1988 through a public process. Local horse owners and MDC/DWM staff identified the designated trails based on water quality protection and the then current preferred routes. Since 1988, Division policies have evolved, reflecting new scientific research, Federal regulations, and enhanced watershed protection. MDC/DWM's designated roads and trails limit access to appropriate locations by prohibiting horses on trails with unbridged stream crossings and within 200 feet of a tributary or source water. This policy is in accordance with MDC/DWM's Master Policy.

Mechanisms for Control:

- Install access barriers where appropriate
- Manage and evaluate access permit program.
- Patrol MDC/DWM designated horseback riding trails and roads.
- Increase water quality monitoring; Monitor and report: visitor levels, visitor conduct problems, manure and litter controls, and erosion and impacts on natural vegetation.

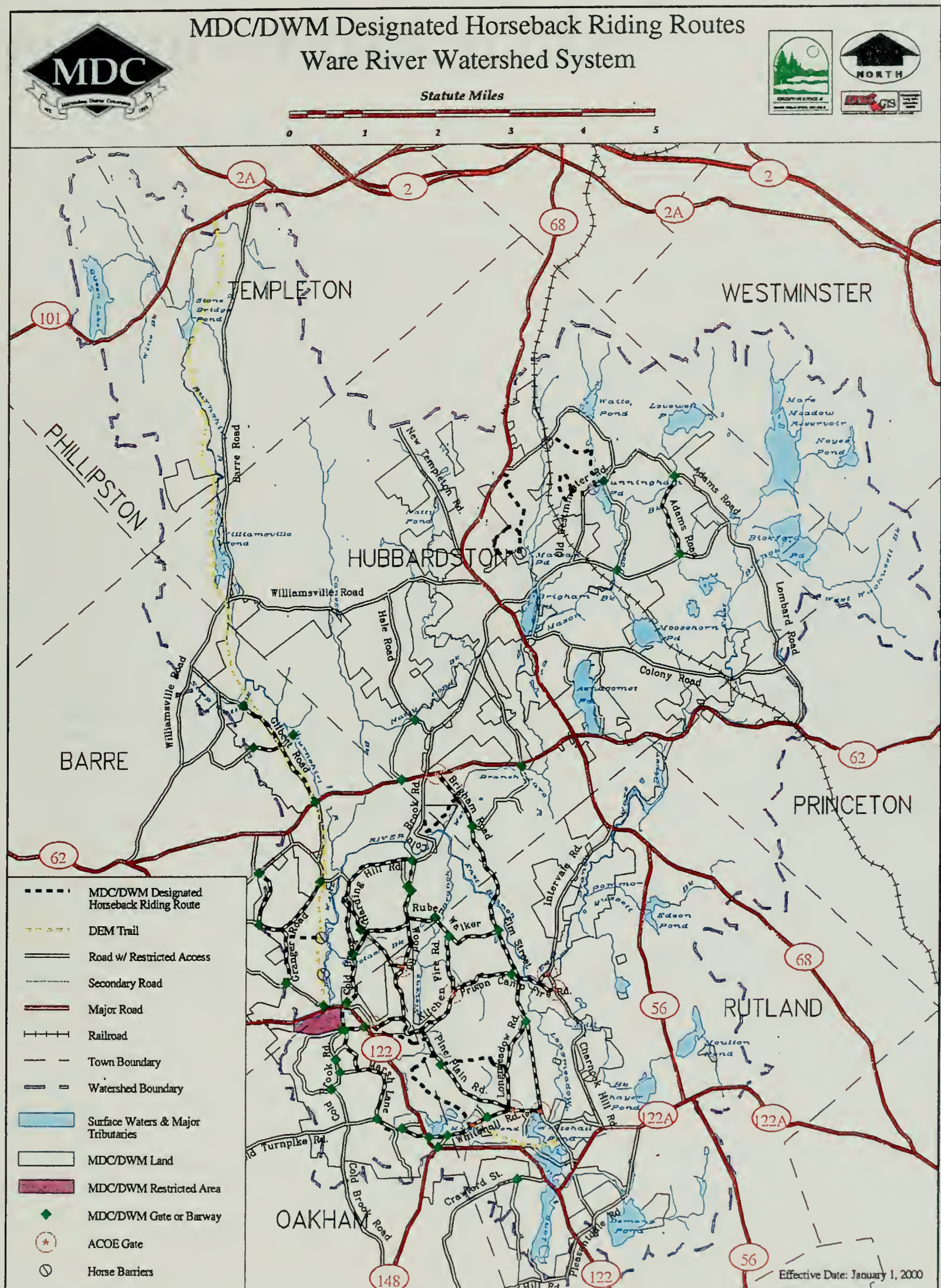


Figure 14 - MDC/DWM Designated Horseback Riding Routes, Ware River Watershed

PART III – WATER ACCESS

Motorized Boating

Policy Summary:

Activity	Ware River Reservation	Ware River Off-Reservation	Ware River Intake - Restricted Area
Motorized Boating	Prohibited	Allowed with specific and general restrictions ⁵	Prohibited

MDC/DWM Motorized Boating Policy:

Motorized boating is prohibited in waters of the Ware River Reservation. Launching gas or electric motorized boats across MDC/DWM lands is allowed with specific and general restrictions in the Ware River Off-Reservation.

General Public Access Policy:

Public access must only be through MDC/DWM gates or other MDC/DWM designated entrances. MDC/DWM allows public access on MDC/DWM owned lands in the Ware River Watershed System at night. For more information, please contact the Quabbin Visitor Center at (413) 323-7221, the Ware River Field Office at (508) 882-3636, or the MDC/DWM Watershed Rangers (413) 323-0191.

Discussion:

Motorized boating in the Ware River Watershed System is specifically prohibited in designated areas, according to the MDC's Watershed Protection Regulations (350 CMR 11.00). Currently, the MDC/DWM Division of Watershed Management limits boat access by limiting motor size on boats launched from MDC/DWM owned lands (see **Table 10**). The Massachusetts Watershed Protection Regulation, 350 CMR 11.09 (2)(a)(3) states: "Power boats are prohibited within the Waters of the Watershed System except in areas designated by the Commission or its designee." MDC/DWM has designated the following ponds as areas where powerboats are allowed: Brigham Pond, Demond Pond, Comet Pond and Long Pond. This policy is a clarification of MDC/DWM's past policy.

In Massachusetts, public access for motor boating from Division owned lands on ponds within the Ware River Off-Reservoir area is regulated by many parties (e.g., MDC/DWM, local town boards, MA Public Access Board, etc.). MDC/DWM does not promote motor boat access since motorized boating on small ponds causes erosion of riparian areas, increased turbidity, contamination of a small waterbody from leaks, and noise pollution. However, MDC/DWM does provide, based on past practices, limited boat launch sites and in some cases, ramps, located on its land. All access activities must conform to MDC/DWM's general public access policy (above). Motor boat access is allowed on MDC/DWM-owned lands on the four ponds listed above, which are detailed in the table below. MDC/DWM limits boat motor size to 20 horsepower for two stroke engines, and 25 horsepower for 4 stroke engines, on boats accessing MDC/DWM lands, with the exception of Long Pond. MDC/DWM issues a limited number of Long Pond access permits for motors greater than 20 horsepower during certain seasons and times. Based on a recent MDC/DWM survey of permit holders, the majority of permit holders have boats 19 feet or less in length with a motor size of 140 hp

⁵ Motor access ramps are provided on MDC/DWM lands at the following locations: Brigham pond, Demond Pond, Comet Pond and Long Pond. Boat motor size is limited to 20 horsepower except on Long Pond with a permit. A permit allows the holder to use a 20+ motor from Memorial Day to Labor Day between 10 a.m. and 6 p.m.

or less (Read, 1999). In addition, more than fifty-percent of the permit holders use four stroke motors. All other applicable local, state, and federal rules and regulations apply to this and related activities (e.g., 324 CMR 2.00- Boat Launching Facilities and Land Under the Control of the Public Access Board).

Table 10 - Boat access ramps located on MDC/DWM lands in the Ware River, Off-Reservation Area

Ponds with Boat Access Ramp	Maximum Motor Size Allowed
Brigham Pond - Hubbardston, MA	Maximum 20 horse power motor (2 stroke) or 25 horse power motor (4 stroke) allowed
Demond Pond - Rutland, MA	Maximum 20 horse power motor (2 stroke) or 25 horse power motor (4 stroke) allowed
Comet Pond - Hubbardston, MA (a.k.a., Asnacomet Pond)	Maximum 20 horse power motor (2 stroke) or 25 horse power motor (4 stroke) allowed
Long Pond - Rutland, MA	Maximum 20 horse power motor (2 stroke) or 25 horse power motor (4 stroke) allowed* <i>*An MDC/DWM Long Pond permit allows the holder to use a 20+ horsepower motor from Memorial Day to the last day of September between 10:00 A.M. and 6:00 P.M. Contact the Quabbin Visitor Center for more information (subject to change).</i>

Mechanisms for Control:

- Increase monitoring for regulatory and permit compliance.
- Evaluate and revise the Long Pond permit policy.

Nonmotorized Boating

Policy Summary:

Activity	Ware River Reservation	Ware River Off-Reservation	Ware River Intake - Restricted Area
Non-motorized Boating	Allowed with specific and general restrictions ⁶	Allowed with specific and general restrictions ⁷	Prohibited

MDC/DWM Nonmotorized Boating Policy:

MDC/DWM allows non-motorized boating access (e.g., canoeing) from MDC/DWM water supply lands in the Ware River watershed according to MDC/DWM's general public access policy except near the Restricted Area of the Ware River Intake.

MDC/DWM General Public Access Policy:

Public access must only be through MDC/DWM gates or other MDC/DWM designated entrances. MDC/DWM allows public access on MDC/DWM owned lands in the Ware River Watershed System at night. For more information, please contact the Quabbin Visitor Center at (413) 323-7221, the Ware River Field Office at (508) 882-3636, or the MDC/DWM Watershed Rangers (413) 323-0191.

Discussion:

Public access across MDC/DWM owned lands for nonmotorized boat access has been a traditional activity within the Ware River Watershed. To date, the Division has not observed significant problems related to this activity and therefore will continue to allow nonmotorized access from Division lands.

Mechanisms for Control:

- Conduct education regarding the updated rules of MDC/DWM, and of other agencies including the State and MA Environmental Police.

⁶MDC/DWM-DWM's general public access policy applies.

⁷ Boat access ramps are provided on MDC/DWM lands at the following locations: Brigham pond, Demond Pond, Comet Pond and Long Pond.

Swimming and Wading

Policy Summary:

Activity	Ware River Reservation	Ware River Off-Reservation	Ware River Intake - Restricted Area
Swimming and Wading	Swimming prohibited with one exception ⁸ . Wading allowed with waders or hip boots.	Swimming prohibited with one exception ⁹ . Wading allowed with waders or hip boots.	Prohibited

MDC/DWM Swimming & Wading Policies:

MDC/DWM prohibits swimming from MDC/DWM lands in the Ware River watershed with the following two exceptions below. MDC/DWM allows wading in tributaries from MDC/DWM lands in the Ware River watershed only with waders or hip boots.

- Limited swimming is allowed in a designated area and during designated times in Comet Pond.
- Limited swimming is allowed in a designated area during designated times in Whitehall Pond (Rutland State Forest operated by MA-DEM). Sanitary facilities are monitored and maintained in each location.

MDC/DWM General Public Access Policy:

Public access must only be through MDC/DWM gates or other MDC/DWM designated entrances. MDC/DWM allows public access on MDC/DWM owned lands in the Ware River Watershed System at night. For more information, please contact the Quabbin Visitor Center at (413) 323-7221, the Ware River Field Office at (508) 882-3636, or the MDC/DWM Watershed Rangers (413) 323-0191.

Discussion:

To prevent fecal contamination in a public drinking water supply no person shall wade or swim in any Tributary or Surface Waters on or within the property of the Commonwealth except at areas designated by the Commission or its designee (350 CMR 1109) 2(a)(8)).

Mechanisms for Control:

- Increase weekend enforcement; respond to seasonal and daily extreme high temperatures with increased surveillance
- Improve signage at Long Pond.

⁸Swimming is allowed in Rutland State Park in designated areas at designated times only. The MA Department of Environmental Management manages this facility.

⁹Swimming is allowed in Comet Pond in designated area and during designated season and times only.

Personal Watercraft

Policy Summary:

Activity	Ware River Reservation	Ware River Off-Reservation	Ware River Intake - Restricted Area
Personal Watercraft (e.g., Jet skis)	Prohibited	Prohibited	Prohibited

MDC/DWM Personal Watercraft Policy:

MDC/DWM prohibits launching personal watercrafts (e.g., jet skis) on any surface water of the Ware River watershed from MDC/DWM lands.

Discussion:

Personal watercraft require full body contact with the water, cause shoreline erosion from the wave action, suspend sediments causing increased turbidity, and cause noise pollution. No person shall wade or swim in any Tributary or Surface Waters on or within the property of the Commonwealth except at areas designated by the Commission or its designee (350 CMR 11.09) 2(a)(8)).

Mechanisms for Control:

- Increase weekend and end of day patrolling and enforcement.
- Respond to seasonal and daily extreme high temperatures with increased surveillance.

PART IV - OTHER ACTIVITIES

Overnight Camping

Policy Summary:

Activity	Ware River Reservation	Ware River Off-Reservation	Ware River Intake
Camping	Prohibited	Allowed with written permission, only with specific and general restrictions	Prohibited

MDC/DWM Overnight Camping Policy:

MDC/DWM prohibits overnight camping on MDC/DWM's water supply lands in the Ware River Reservation. Camping includes, but is not, limited to tenting, trailers, lean-tos, and motor homes. Overnight parking in the Ware River Watershed System is prohibited. MDC/DWM allows limited overnight camping, only within Off-Reservation lands, on a case-by-case basis, and only with written permission from the MDC/DWM Quabbin/Ware Superintendent, for camping at a designated location.

MDC/DWM General Public Access Policy:

Public access must only be through MDC/DWM gates or other MDC/DWM designated entrances. MDC/DWM allows public access on MDC/DWM owned lands in the Ware River Watershed System at night. For more information, please contact the Quabbin Visitor Center at (413) 323-7221, the Ware River Field Office at (508) 882-3636, or the MDC/DWM Watershed Rangers (413) 323-0191.

Discussion:

MDC/DWM prohibits overnight camping on water supply lands within the Ware River watershed because of a number of public health and safety concerns. These issues would divert water management resources from water rate payers to conduct recreational management activities on water supply lands. Camping, historically prohibited in the system, increases sanitation problems and fire protection issues. Chapter 737, the Acts of 1972 prohibit camping in the Ware River Reservation. The current Watershed Protection Regulation 350 CMR 11.09 (2)(a)(2) states that: "No Person is allowed within any land of the Watershed System, except from one hour before sunrise to one hour after sunset, unless authorized by a written permit from the Commission or its designee." This policy has been clarified.

Mechanisms for Control:

- Continue monitoring and surveillance within the Reservation, and along the banks of the Ware River.
- Post signs requiring MDC/DWM notification at any camping sites.
- Install sanitary waste facility at the Mid-state trail lean-tos.

Organized Sports/Field Sports

Policy Summary:

Activity	Ware River Reservation	Ware River Off-Reservation	Ware River Intake
Organized Sports/Field Sports	Prohibited except by written permission	Prohibited except by written permission	Prohibited

MDC/DWM Organized Sport/Field Sport Policy:

MDC/DWM prohibits organized sports and field sports on MDC/DWM's water supply lands in the Ware River watershed, except by written permit from the MDC/DWM Quabbin Superintendent.

MDC/DWM General Public Access Policy:

Public access must only be through MDC/DWM gates or other MDC/DWM designated entrances. MDC/DWM allows public access on MDC/DWM owned lands in the Ware River Watershed System at night. For more information, please contact the Quabbin Visitor Center at (413) 323-7221, the Ware River Field Office at (508) 882-3636, or the MDC/DWM Watershed Rangers (413) 323-0191.

Discussion:

Organized sports and field sports introduce increased recreation and concentrated attendance and observers to an area, thus increasing water quality threats such as improper fecal waste disposal and land use alterations, which cause erosion and sedimentation. Organized sports are limited according to MDC/DWM's Master Policy for Public Access. MDC/DWM's development and maintenance of playgrounds or sports fields are inappropriate with the MDC/DWM's Master Policy, aimed at limiting or minimizing new recreational activities or increased intensity of existing activities in the public water supply watershed. This policy has been clarified from earlier Plan

Mechanisms for Control:

- Monitor on a case by case basis.

Programs/Assemblies (e.g., Weddings, etc.)

Policy Summary:

Activity	Ware River Reservation	Ware River Off-Reservation	Ware River Intake
Programs/Assemblies (e.g., Weddings, etc.)	Allowed with specific and general restrictions	Allowed with specific and general restrictions ¹⁰	Prohibited

MDC/DWM Policy:

MDC/DWM allows assemblies of less than twenty-five individuals. Groups of twenty-five (25) individuals or fewer should notify the MDC/DWM by contacting the Quabbin Visitor Center at least 48 hours in advance. Access is allowed according to MDC/DWM's general public access policy. MDC/DWM requires any assembly of twenty-five individuals or more to obtain an MDC/DWM permit (see Appendix). Contact the Quabbin Visitor Center for more information, to notify MDC/DWM, or to obtain a permit application.

MDC/DWM General Public Access Policy:

Public access must only be through MDC/DWM gates or other MDC/DWM designated entrances. MDC/DWM allows public access on MDC/DWM owned lands in the Ware River Watershed System at night. For more information, please contact the Quabbin Visitor Center at (413) 323-7221, the Ware River Field Office at (508) 882-3636, or the MDC/DWM Watershed Rangers (413) 323-0191.

Discussion:

MDC/DWM requires an assembly of more than twenty-five individuals to obtain an MDC/DWM permit. This process limits and controls large group public access according to MDC/DWM's Master Policy for Public Access. The Massachusetts Watershed Protection Regulation, 350 CMR 11.09(2)(a)(18), states: "Public assemblies of more than twenty-five persons shall not be allowed within the Watershed System without a written permit from the Commission or its designee." This policy has been clarified.

Mechanisms for Control:

- Coordinate with the State Police and Watershed Rangers.

Fishing Derbies

Policy Summary:

Activity	Ware River Reservation	Ware River Off-Reservation	Ware River Intake
Fishing Derbies	Prohibited except by written permission	Prohibited except by written permission	Prohibited

MDC/DWM Fishing Derby Policy:

MDC/DWM prohibits fishing derbies on MDC/DWM's water supply lands or in the waters in the Ware River Watershed except with written permission from the MDC/DWM Quabbin/Ware Superintendent. Contact the Quabbin Visitor Center at (413) 323-7221.

MDC/DWM General Public Access Policy:

Public access must only be through MDC/DWM gates or other MDC/DWM designated entrances. MDC/DWM allows public access on MDC/DWM owned lands in the Ware River Watershed System at night. For more information, please contact the Quabbin Visitor Center at (413) 323-7221, the Ware River Field Office at (508) 882-3636, or the MDC/DWM Watershed Rangers (413) 323-0191.

Discussion:

MDC/DWM prohibits fishing derbies for raising or collecting funds, according to the Division's Master Policy and Watershed Protection Regulations. MDC/DWM's Master Policy prohibits activities that increase the intensity of public access. The Massachusetts Watershed Protection Regulation, 350 CMR 11.09 (2)(a)(16), states: "Parades, games, fairs, carnivals, fishing derbies, bazaars, gifts or solicitations for raising or collecting funds shall not be permitted within the Watershed System without written approval of the Commission or its designee." When the regulations were updated in 1994, fishing derbies were specifically added to the list of regulatory prohibitions as recommended in the 1988 Plan.

Mechanisms for Control:

- Educate current sponsors of Fishing Derbies about the need for an MDC/DWM permit.
- Limit the number of fishing derbies to current level.

Trail Marking/ Advertising

Policy Summary:

Activity	Ware River Reservation	Ware River Off-Reservation	Ware River Intake - Restricted Area
Trail Marking/Advertising	Prohibited	Prohibited	Prohibited

MDC/DWM Trail Marking/Advertising Policy:

MDC/DWM prohibits unauthorized trail marking, advertising, or any other placement of signs or symbols on MDC/DWM's water supply lands in the Ware River watershed. MDC/DWM staff will install or supervise all trail marking. MDC/DWM prohibits painted signs on MDC/DWM property (e.g., trees, roads, etc.). This activity is considered defacing the Commonwealth's resources.

Discussion:

Unauthorized signs can imply MDC/DWM's designation of a trail for recreational access. The placement of unauthorized signs is closely monitored. Any violation of this policy will be strictly enforced (i.e., signs will be removed and associated groups will be investigated). MDC/DWM will censor noncompliance parties accordingly. Trail marking, advertising, or any other unauthorized placement of signs on MDC/DWM water supply lands in the Ware River Watershed System is prohibited by the Massachusetts Watershed Protection Regulation, 350 CMR 11.09(2)(a), which states: "Commercial signs and advertising are prohibited in the Watershed System." In addition, the Watershed Protection Regulation, 350 CMR 11.09(2)(a)(5), states: "All acts which injure the Commonwealth are prohibited. No Person shall injure, deface, destroy, remove, or carry off any property, real or personal, under the care and control of the Commission..." This policy has been clarified and updated.

Please see MDC/DWM's sign policy and standards for instructions regarding the process of placing authorized signs on water supply lands for case-by-case situations (see **Chapter 4**).

Mechanisms for Control:

- Develop a management system for authorized signs including standards.
- Identify MDC/DWM on existing signage at critical areas (e.g., boat launch areas)
- Monitor, remove, and investigate noncompliance signage.

Trail Clearing

Policy Summary:

Activity	Ware River Reservation	Ware River Off-Reservation	Ware River Intake - Restricted Area
Trail Clearing	Prohibited	Prohibited	Prohibited

MDC/DWM Trail Clearing Policy:

MDC/DWM prohibits trail clearing on MDC/DWM's water supply lands in the Ware River watershed. MDC/DWM will censor noncompliance parties accordingly. Trail clearing is considered defacing the Commonwealth's resources.

Discussion:

Division staff have observed an increase in the number of new, unauthorized trails on MDC/DWM lands in the Ware River watershed. In addition, many footpaths on Division lands are being widened and straightened, without authorization, for uses other than foot traffic. Trail clearing on MDC/DWM water supply lands of the Ware River Watershed is prohibited by the Massachusetts Watershed Protection Regulation, 350 CMR 11.09(2)(a)(5), which states: "All acts which injure the Commonwealth are prohibited. No Person shall injure, deface, destroy, remove, or carry off any property, real or personal, under the care and control of the Commission..." This policy has been clarified and updated. Trail maintenance is allowed only with written authorization and oversight by MDC/DWM staff.

Mechanisms for Control:

- Strictly investigate and censor parties accordingly.
- Block, remediate, and monitor for use any unauthorized trail.

Possessing Alcoholic Beverages

Policy Summary:

Activity	Ware River Reservation	Ware River Off-Reservation	Ware River Intake - Restricted Area
Possessing Alcoholic Beverages	Prohibited	Prohibited	Prohibited

MDC/DWM Policy:

MDC/DWM prohibits the possession or drinking of alcoholic beverages while on MDC/DWM water supply lands, throughout MDC/DWM's water supply lands in the Ware River watershed.

Discussion:

Division staff continue to report evidence of regulatory violations related to the possession of alcohol within the Ware River Watershed System. Excessive consumption of alcohol leads to a disregard of MDC/DWM's rules, regulations, and policies. The Massachusetts Watershed Protection Regulation, 350 CMR 11.09(2)(a) states: "...Possession of and drinking of alcoholic beverages is prohibited within said system." This policy remains unchanged.

Mechanisms for Control:

- Coordinate with the State Police.

Collecting and Metal Detecting

Policy Summary:

Activity	Ware River Reservation	Ware River Off-Reservation	Ware River Intake - Restricted Area
Collecting and Metal Detecting	Prohibited	Prohibited	Prohibited

MDC/DWM Collecting and Metal Detecting Policy:

MDC/DWM prohibits collecting and metal detecting activities within MDC/DWM's water supply lands in the Ware River Watershed System.

Discussion:

MDC/DWM prohibits collecting and metal detecting activities on Division lands in the Ware River watershed system, to protect historic and pre-colonial sites. The Massachusetts Watershed Protection Regulation, 350 CMR 11.09(2)(a)(5) states: "All acts which injure the property of the Commonwealth are prohibited. No Person shall injure, deface, destroy, remove, or carry off any property, real or personal under the care and control of the Commission, including but not limited to, all historic artifacts and natural materials." In addition, 350 CMR 11.09(2)(a) states: "The possession of all types of metal detectors or similar devices is prohibited on all the watershed system property." These regulations were updated in 1992 by adding reference to historic artifacts and natural materials, and by adding the prohibition of metal detectors. This policy has been updated to reflect changes in the regulations.

Mechanisms for Control:

- Continue support of on going historical survey work.
- Provide education related to cultural resources.
- Continue appropriate enforcement actions.

Target Shooting

Policy Summary:

Activity	Ware River Reservation	Ware River Off-Reservation	Ware River Intake - Restricted Area
Target Shooting	Prohibited	Prohibited	Prohibited

MDC/DWM Target Shooting Policy:

MDC/DWM prohibits target shooting on MDC/DWM's water supply lands in the Ware River watershed.

Discussion:

MDC/DWM prohibits target shooting on MDC/DWM's lands in the Ware River Watershed System following the Massachusetts Watershed Protection Regulation, 350 CMR 11.09(2)(a)(21), which states: "...MDC/DWM prohibits all forms of target shooting on or within MDC/DWM lands in the Watershed System." This regulation was updated in 1994 to prohibit target shooting. MDC/DWM's Master Policy for Public Access to preserve the apparent wilderness character in the system supports this policy.

Mechanisms for Control:

- Continue enforcement.

Other Activities

MDC/DWM Policy:

MDC/DWM will review all other public access or recreation oriented activities not specifically described in this plan, on a case-by-case basis to determine MDC/DWM's specific policy.

4 General Public Access Operations

MDC/DWM staff have identified three types of general operational issues related to public access management in the Ware River watershed: gate-barway¹¹ closing schedules; sanitary waste facility siting and maintenance; and MDC/DWM designated trail signs and standards. These three operational issues related to public access management on Division lands in the Ware River watershed, are discussed below in detail.

4.1 MDC/DWM Gate-Barway Closing Schedule

The MDC/DWM designs and maintains its internal road system in the Ware River watershed for vehicle access necessary for watershed protection activities. These management activities include: water sampling, forest management activities, patrolling and monitoring, maintaining fire roads for fire protection, conducting sanitary surveys, scientific research, and inventory activities. The MDC/DWM manages this road system to reduce road erosion and possible sedimentation. Besides MDC/DWM maintained roads, there are many farm lanes, past logging roads, and seasonal access routes that provide limited access under specific situations to MDC/DWM lands. MDC/DWM owns approximately 23,000 acres in the Ware River watershed, and maintains access roads to most of this land. As part of the Division overall watershed management program, the Division installs gates and barways on roads accessing MDC/DWM lands in order to control and limit vehicular traffic; and thus, limit regulatory noncompliance, prevent illegal dumping, and minimize erosion (see **Figure 15**). Over time, the Division anticipates the installation of gates, barways, and barriers, as appropriate.

Currently, the MDC/DWM operates and maintains approximately eighty-five metal gates and wooden/steel barways in the Ware River watershed to limit and control public access. MDC/DWM gates and barways are painted yellow, if metal, and green, if wooden. The MDC/DWM's closing schedule of MDC/DWM gates or barways is designed to improve control of public access, to limit non-compliance, to prevent illegal dumping, and to limit the degradation of the Division's road systems, especially during mud season. The closure schedule below will be applied to the Division's roads (see **Table 11**). This schedule may be amended over time.

Table 11 - MDC/DWM Gate and Barway Operational Schedule Description

Gate/Barway Type	Description
Three season Access	Gates and barways are closed during spring "mud season" (March-April) or during threat of flood.
Seasonal Access	Gates and barways are open seasonally: ➤ May through December November and December.
Year round Closure	Gates or barways are closed at all times to vehicle access except for officially designated limited access

¹¹ A barway is typically a wooden structure obstructing passage through a road or trail with an operable gate which is locked.

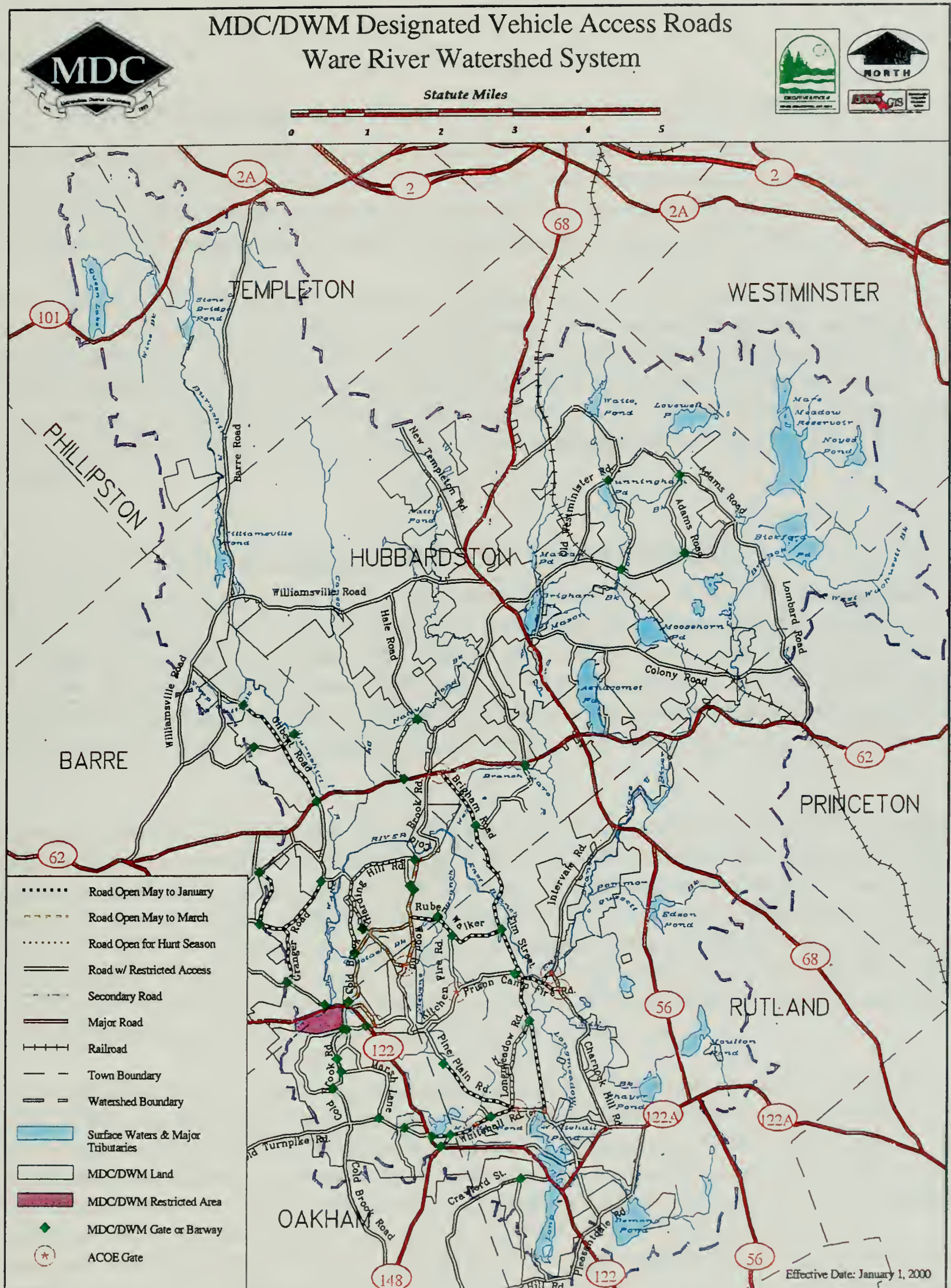


Figure 15 - MDC/DWM Roads, Gates, and Barways

4.2 MDC/DWM Sanitary Waste Facilities (Portable Toilets)

Reducing the risk of waterborne disease via pathogens (i.e., bacteria, viruses, and protozoa) is a top water quality goal for the MDC/DWM. The Division's watershed protection program is designed to minimize this risk at each step in the water supply pathway (source, treatment, and distribution). The Division's use of portable toilets, located in strategic locations, is part of this strategy.

Currently, the MDC/DWM locates, operates, and monitors two sanitary waste facilities (i.e., sani cans) near Comet Pond in Hubbardston, Massachusetts. There are two other public sanitation facilities within interior MDC/DWM lands in addition to MDC/DWM managed sanitary waste facilities with State and Federal lands in the Ware River watershed. The U.S. Army Corps of Engineers operate restroom facilities at the Barre Falls Dam complex in the towns of Hubbardston, Barre, and Oakham, Massachusetts. The DEM operates and maintains another facility in Rutland State Park.

4.3 MDC/DWM Designated Trail Signs and Standards

The 23,000 acres of MDC/DWM-owned land within the Ware River watershed is an important, forested land holding for public drinking water supply protection. With increasing regulatory constraints and population pressures, effective signage is a critical part of managing this natural resource. Signs are targeted to raise public awareness of the Ware River watershed's role in water supply source protection, to increase visitors' compliance with agency rules and regulations, to insure public safety, to identify the boundaries of MDC/DWM land holdings, and to protect the area resources.

Currently, the MDC/DWM has minimal signage on its watershed land in the Ware River watershed. Many believe this contributes to the watershed's apparent wilderness character. Most MDC/DWM signs are posted around the perimeter of the Division's land holdings and at the major access points used by motorized vehicles, snowmobiles, bicyclists, horseback riders, and hikers. Based on public input, the MDC/DWM will continue to locate signs at major public access points in order to maintain the wild appearance of these watershed lands, to prevent visual clutter, and to make the signs useful. The MDC/DWM will limit signage in its interior locations to those designed to educate users about management practices and/or to address specific public access issues.

Much of the Ware River watershed is managed by State natural resource agencies including the MDC/DWM, the MA Division of Fisheries and Wildlife, the Department of Environmental Management, as well as by the federal Army Corps of Engineers (US ACOE, 1986). Each organization has different mandates and management goals, and therefore, implements programs in very different ways. Cooperation and coordination among the agencies is necessary to protect the collective resources of the watershed. Currently, the MDC/DWM has a memorandum of understanding with the MA Division of Fisheries and Wildlife (MDC/DFW, 1994) regarding public access to waters of the Commonwealth. The MDC and Department of Environmental Management hold a Memorandum of Agreement (MDC/DEM, 1998) concerning the care and protection of the watershed lands in the Ware River watershed. In addition, the MDC and ACOE have a long-standing practice of coordination of recreational policies on state and federal water resource lands.

Based on MDC/DWM staff and public input, the MDC/DWM plans the following signage changes and improvements:

- Incorporate MDC/DWM's role in public drinking water supply protection into the signs.
- Create consistency between all signs with respect to color schemes, font styles, and consistency in message and language. Icons or universal symbols should be used whenever possible.
- Designate sign location carefully to insure appropriate number and efficient placement.
- Develop interpretive signs for sites with specific historical or natural history significance (e.g., the Prison Camp, the Army Corps Dikes, Ware River tributaries, etc.).
- Provide more general information to the public. Basic drinking water supply and watershed protection information will be presented with a location-specific map of the area.

The MDC/DWM Public Access Policy Summary will be incorporated into the MDC/DWM's permanent signs. Several season-specific panels, addressing particular activities, such as snowmobiling, skiing, bicycling and hunting, will be developed.

For example, these signs (a.k.a. kiosks) can be located and maintained at the five major access entry points into the watershed:

- Coldbrook Road - south end off Route 122;
- Coldbrook Road - north end;
- Rutland State Park entrance;
- Prison Camp off Charnock Hill Road; and
- Coldbrook Camp.

Other public access points will be posted with an updated MDC/DWM perimeter sign for the Ware River watershed.

4.4 Sign and Trail Marking Standards

Historically, individual clubs have designated and marked trails on MDC/DWM lands. These signs varied in color, shape, and spacing of trail signage. MDC/DWM staff did not systematically review these signs relative to one another. As a result, trail markings were haphazardly arranged, inconsistent, and often misleading. To unify sign standards on MDC/DWM land in the Ware River watershed, the sign standards listed below will now apply (see **Table 12**).

Table 12 - Generalized sign standards for MDC/DWM designated trail types

Trail Type	MDC/DWM Trail Markings
MDC/DWM Designated Snowmobile Trails	Blue diamond plus "stay on trail signs" at certain intersections.
MDC/DWM Designated Horseback Riding Roads and Trails	Yellow square plus yellow, green or blue flagging for special rides
MDC/DWM Designated Bicycle Roads and Trails	White circle
Cross-country Ski Trail	Green circle
Mid-State Trail	Yellow Triangle

Trail Marking Conventions:

Trail markings will be spaced only as close as necessary to keep the trail user on track. At forks and intersections, two marks will be placed within sight down each designated trail. Two marks, one above the other, will signify a turn. Spacing will depend on terrain and other sight-distance considerations. Well-worn paths need fewer markings than snow trails. MDC/DWM staff will remove signs not conforming to the plan. In the case of designated horse trails, the signs will be placed at eye-level for a typical horseback rider.

5 Plan Implementation

The MDC/DWM staff will communicate, implement, monitor, and enforce the Division's updated policies regarding public access on Division land in the Ware River watershed beginning on January 1, 2000. MDC/DWM has listed activities to date, to initiate the implementation of the *MDC/DWM Public Access Management Plan Update – Ware River Watershed* (see **Table 13**). These activities will change over time.

Table 13 - Generalized Activities for Plan Implementation

	ACTIVITIES
All Staff:	
	<ul style="list-style-type: none"> ◆ Implement Plan, evaluate plan, and modify Plan when necessary. ◆ Monitor threats, report violations, take corrective action, document findings. ◆ Conduct public education and outreach for watershed protection. ◆ Evaluate public access uses and intensity over time and throughout MDC/DWM lands and waters. ◆ Continue to gather public input.
Specific Programs:	
Sanitary Survey/ Watershed Inspection Program	<ul style="list-style-type: none"> ◆ Monitor water quality threats due to access type, frequency, location, etc., ◆ Report violations. ◆ Make corrective actions. Document findings.
Watershed Ranger Program	<ul style="list-style-type: none"> ◆ Conduct regularly scheduled patrols of the Ware River Watershed. ◆ Investigate establishing a facility in a central location in the Ware River watershed. ◆ Coordinate with enforcement agencies.
Forestry Program	<ul style="list-style-type: none"> ◆ Maintain and mark property boundaries. ◆ Monitor, investigate, report and correct or refer illegal actions.
Watershed Maintenance	<ul style="list-style-type: none"> ◆ Maintain roads, bridges, culverts, and dams on MDC/DWM lands and waters. ◆ Install and maintain access controls (e.g., gates and barways). ◆ Install and maintain erosion controls.
Water Quality Program	<ul style="list-style-type: none"> ◆ Report and investigate anomalies found in routine water quality monitoring data.
Interpretative Services	Focus programs on schools in watershed communities
New Programs:	
Signage Program	<ul style="list-style-type: none"> ◆ Replace existing signs. ◆ Design, produce, and install new signs.
Sanitary Facilities	<ul style="list-style-type: none"> ◆ Locate, install, and maintain "portable toilets" or best available technology. ◆ Locate, install, and maintain facility for the proper disposal of domesticated animal and horse fecal wastes.

6 Conclusions

The MDC/DWM's staff has designed the *MDC/DWM Public Access Management Plan Update - Ware River Watershed* to guide and control the recreational use of approximately 23,000 acres of MDC/DWM land and waters for water quality protection and ecological purposes in the Ware River Watershed. The Plan includes twenty-seven public access policies for common activities conducted within MDC/DWM lands and waters in the Ware River watershed. The MDC/DWM has incorporated new information related to drinking water supply protection into this updated Plan. The primary sources of information used in the Plan and the updated policies included new legislation and regulations, scientific and professional literature review, public input, and field-staff recommendations. As a result of the Division's update process, MDC/DWM has also revised the 1998 Master Policy Statement regarding public access within the Ware River watershed. MDC/DWM's revisions have clarified information and policy gaps identified over the past ten years.

Watershed protection strategies change over time, depending on new scientific information, regulatory changes, land use changes, and public values. Given these externalities, the MDC/DWM fully recognizes the likelihood that the scope and focus of today's Public Access Management Plan will change during the next decade. At this time, the *MDC/DWM Public Access Management Plan Update- Ware River Watershed* provides the framework for the following improvements to the MDC/DWM's watershed protection program, conducted in the Ware River River Watershed. These improvements include:

- Enhanced pathogen prevention techniques;
- Improved regulatory compliance through specifically tailored control measures;
- Enhanced sanitary waste facilities;
- Coordinated monitoring, patrolling, education, and enforcement activities;
- Improved visitor informational resources; and
- Continued partnership activities with stakeholders, advisory committees and state and federal agencies.

The Division will amend or update this plan and maps in 2010, or earlier if needed.

GLOSSARY OF TERMS

Listed in alphabetical order below, are terms and definitions that the MDC/DWM uses throughout the *MDC/DWM Public Access Management Plan Update - Ware River Watershed*.

Access:

public access in the Division's management context is wide-ranging and ever-changing. It includes the concepts of: the physical ability to enter and use land, restrictions or prohibitions on specific land or water-based recreational activities, signing, mapping, public education, intergovernmental coordination, land and easement acquisition, public safety, and protection of public and private property rights.

All-terrain vehicle (ATV):

a vehicle designed for off-road use with aggressive tread patterns to overcome natural obstacles.

Automobile:

a passenger vehicle that has four wheels and an engine used for land transport.

Basin or Sub-basin:

the land area from which all water flows to a single, identified water source, such as a stream, a river, or a reservoir. Sub-basin is used to refer to the basin of a tributary.

Best Management Practices, BMP's:

a set of standards that have been designed for an activity, and often a region, to protect against degradation of resources during management operations.

***Cryptosporidium parvum*:**

a protozoan parasite found in humans and various wild and domestic animals that can be transmitted via water, and often causes serious intestinal illness.

Dog Handling:

causing dogs to be present (included dog walking, hunting with dogs, etc.)

Gate:

a structure of metal, wood, or other material installed and or maintained by DWM staff on MDC/DWM lands.

Geographic Information System (G.I.S.):

a computer-based analysis and mapping system for spatially-linked data sets.

Giardia lamblia:

a protozoan parasite found in humans and various wild and domestic animals that can be transmitted via water, and often causes serious intestinal illness.

Hazard:

an act or phenomenon that has the potential to produce harm or other undesirable consequences to humans or what they value.

Kelly-Wetmore Act:

Chapter 737 of the Acts of 1975 which set forth rules for the management of Quabbin Reservoir and Ware River watershed lands and waters.

Jet Ski:

see personal watercraft.

Maintained road:

an open way for the passage of vehicles through MDC/DWM managed lands used in on-going watershed management activities (excludes skid trails).

Massachusetts Water Resources Authority (MWRA):

the Massachusetts Water Resources Authority (MWRA) is an independent public authority established in 1984 by the Massachusetts Legislature. MWRA's primary mission is to modernize the metropolitan area water and sewer systems, to conserve water resources, and to improve the water quality of Boston Harbor.

Metropolitan District Commission, Division of Watershed Management (MDC/DWM):

the Metropolitan District Commission's Division of Watershed Management, a Massachusetts State Agency within the Executive Office of Environmental Affairs, is responsible for the collection and safe storage of water, protection of reservoir water quality, and management of the watersheds for metropolitan Boston and the Chicopee Valley Service Area.

Mud Season:

a time of year typically defined as the months of April and May, but which varies seasonally.

Off-Reservation:

MDC/DWM-owned lands within the Ware River Watershed that are outside of Rts. 122, 122A, 56, 68, and 62.

Off-road vehicle (ORV):

nonregistered motorized vehicles such as ATVs and dirt bikes.

Pathogen:

an agent that causes disease, especially a microorganism such as protozoa or bacteria.

Personal Watercraft:

small performance oriented, engine powered, boat, usually designed for 1 or 2 passengers (e.g., Jet Ski).

Risk:

a concept used to give meaning to things, forces, or circumstances that pose danger to people or to what they value.

Snowmobile:

a small vehicle with ski-like runners in front and tank-like tread, used for driving in or traveling on snow.

Swimming:

to propel, float, or immerse oneself through or on water.

Vehicle

an automobile used for carrying passengers, registered for public roadways.

Wading:

to walk in or through water.

Ware River Reservation:

all MDC/DWM-controlled lands and waters within Rts. 122, 122A, 56, 68, and 62, and subject to additional restrictions set forth in Ch 737 of the Acts of 1972 (a.k.a., “Kelly-Wetmore Act).

Ware River Intake:

the MWRA diversion facility located on the Ware River in Barre, Massachusetts, also referred to the “Restricted Area” in this Plan.

watershed protection:

an integrated, holistic processes that effectively and efficiently preserves, protects and restores, the physical, chemical, and biological integrity of the water resources within a defined hydrologic area.

water quality:

defined using the physical, chemical, and biological integrity mandates of the U.S. Clean Water Act.

REFERENCES CITED

- M.G.L. Chapter 350, Acts of 1919 (Creation of MDC)
 M.G.L. Chapter 375, Acts of 1926 ("Ware River Act")
 M.G.L. Chapter 737, Acts of 1972 ("Kelly-Wetmore Act")
 M.G.L. Chapter 373, Acts of 1984 (Creation of DWM)
 M.G.L. Chapter 92, Acts of 1992 ("Watershed Protection Act")
- Code of Massachusetts Regulations (CMR):
 310 CMR 22.00 Drinking Water (1997)
 324 CMR 2.00 Boat Launching Facilities and Land Under the Control of the Public Access Board
 350 CMR 8.00 Land Within Watershed Reservation
 350 CMR 11.00 Watershed Protection
- American Water Works Association, 1987. "Recreational Use of Domestic Water Supply Reservoirs." AWWA Government Affairs, Adopted by the Board of Directors June 13, 1971 and reaffirmed January 28, 1979, and January 25, 1987. URL: <http://www.awwa.org/govtaff/recuspol.htm>
- Ashendorff, Arthur, et al., 1997. "Watershed Protection for New York City's Supply." American Water Works Association Journal. Vol. 89, No. 3 (March). p. 75.
- Campbell, Scott, et al., 1994. "Metropolitan District Commission - Division of Watershed Management Ware River Watershed, West Branch Sanitary Survey Report." Metropolitan District Commission Division of Watershed Management, Boston. 106 pp.
- _____, 1996. "Metropolitan District Commission - Division of Watershed Management, Watershed Patrol Report 1995." Metropolitan District Commission Division of Watershed Management, Boston. 218 pp.
- _____, 1997. "Metropolitan District Commission - Division of Watershed Management, Quabbin Reservoir Watershed and Ware River Watershed Water Quality Report." Metropolitan District Commission Division of Watershed Management, Boston. 96 pp.
- Centers for Disease Control et al. 1995. "Assessing the Public Health Threat Associated with Waterborne Cryptosporidiosis: Report of A Workshop 'Prevention and Control of Waterborne Cryptosporidiosis: An Emerging Public Health Threat'", September 22-23, 1994. US Government Printing Office, Washington, D.C. 18 pp.
- Centers for Disease Control and Prevention, National Center for Infectious Diseases, Division of Parasitic Diseases, 1995. Cryptosporidiosis Fact Sheet. URL: <http://www.cdc.gov/ncidod/dpd>
- Clark, Dan, 1999. "Quabbin and Wachusett Reservoir Watersheds Aquatic Wildlife Pathogen Control Zones." Metropolitan District Commission Division of Watershed Management, Natural Resources Section, West Boylston. 17 pp.

- Comprehensive Environmental, Inc., 1998. "Agricultural Best Management Practices Evaluation. Quabbin, Ware River and Wachusett Watersheds." Prepared for the Metropolitan District Commission, Boston. 202 pp.
- Craun, Gunther, 1990. "Causes of Waterborne Outbreaks in the United States." Water Science and Technology. Vol. 22, 149-152.
- DeVillars, John, 1999. Letter to Senator Kennedy. US Environmental Protection Agency, Region 1. April. 3 pp.
- Dubey, J.P., et al., 1990. Cryptosporidiosis of Man and Animals. CRC Press. Boca Raton. 297 pp.
- Dore, Stanley, 1941. "Design and Construction of Pressure Aqueduct for Boston Metropolitan District." Journal of New England Water Works Association, September.
- Dunn, T. and Leopold, L.B., 1978. Water in Environmental Planning. W.H. Freeman and Company, New York. 818 pp.
- Eager, Karen and Hopkinson, Matt, 1992. "Metropolitan District Commission - Division of Watershed Management, Burnshirt Sanitary District - A Survey of Potential Water Pollution Sources." Metropolitan District Commission Division of Watershed Management, Boston. 106 pp.
- EPA Interim Enhanced Surface Water Treatment Rule (IESWTR). Federal Register. December 16, 1998.
- Fayer, R., ed., 1997. "Cryptosporidium and Cryptosporidiosis." CRC Press, Boca Raton. 219 pp.
- Graefe, Alan, et al., 1990. "Visitor Impact Management: A Review of Research." Vol. I. National Parks and Conservation Association. Washington, DC. 256 pp.
- _____, 1990. "Visitor Impact Management: The Planning Framework." Vol. II. National Parks and Conservation Association. Washington, DC. 105 pp.
- Greene, J.R, 1991. The Other Lost Valley: An Album of the Villages Lost to the Ware River Diversion." Transcript Press, Athol, MA. 69 pp.
- Gustavsen, Lisa and Hopkinson, Matt, "2000 A Report on Attitude of Abutters to Water Supply Lands Regarding Public Access" Report in progress as of December 1999.
- Gustavsen, Lisa, et. al, 1998. MDC Public Access Plan - Quabbin Reservoir Watershed System." Metropolitan District Commission - Division of Watershed Management, Boston. 151 pp.
- Gustavsen, Lisa and Pula, William, 2000 "Public Access Management Plans for Public Drinking Water Supply Watersheds." Metropolitan District Commission – Division of Watershed Management, Boston. Report in progress as of December 1999.

Hopkinson, Matthew, 1993. "Pilot Recreational Sanitation Report." Metropolitan District Commission Division of Watershed Management, Boston. 61 pp.

_____, 1994. "Metropolitan District Commission - Division of Watershed Management Ware River Watershed, East Branch Sanitary Survey Report." Metropolitan District Commission Division of Watershed Management, Boston. 83 pp.

_____, 1999. "Impacts Associated with Domestic Horses on Eastern U.S. Watershed Lands." Metropolitan District Commission Division of Watershed Management, Boston. 5 pp.

House, M. A., 1996. "Public Perception and Water Quality Management." Water Science and Technology. Vol 34, No 12. p. 25.

Howe, Donald, 1951. "Quabbin: The Lost Valley." The Quabbin Book House, Ware, Massachusetts. 631 pp.

LeChevallier, MW, and Norton, Lee, 1991. "Giardia and Cryptosporidium spp. in filtered drinking water supplies." Applied Environmental Microbiology. 57(9): 2617-21.

Long, Sharon, 1999. "Project Continuation. Model Development of Methods to Differentiate Microorganisms in Metropolitan District Commission Reservoir Watersheds." University of Massachusetts, Department of Environmental Engineering, Amherst, MA. 52 pp.

MacKenzie, W. et al, 1994. "A Massive Outbreak in Milwaukee of Cryptosporidium Infection Transmitted Through the Filtered Public Water Supply." New England Journal of Medicine. 331:3:161-7.

Massachusetts Department of Environmental Protection, 1996. "Program to Measure Success of Watershed Protection Efforts Conducted by Public Surface Water Supplies to Obtain and Maintain A Waiver from Filtration Requirement." Massachusetts Department of Environmental Protection. Boston. 11 pp.

_____, 1999. Letter to the MDC/DWM and MWRA regarding DEP's on-site inspection.

Massachusetts Department of Public Health, 1998.

Massachusetts Water Resources Authority, 1998. "Working Together For Clean Water." Massachusetts Water Resources Authority, Boston 8 pp.

Manning, R.E., 1979. "Impacts of Recreation on Riparian Soils and Vegetation." Water Resources Bulletin, 15, n.1:30-43.

McGinn, Joseph, 1996. "Metropolitan District Commission Sanitary Surveys – 100 Years of Protection." Journal of New England Water Works Association. June. pp. 123-127.

Metropolitan District Commission and Department of Environmental Management, 1998. "Memorandum of Agreement Between the Commonwealth of Massachusetts Department of Environmental Management and Metropolitan District Commission Concerning the Protection of the ***MDC/DWM Public Access Management Plan Update - Ware River Watershed January 2000***

Water Supply Watersheds of the MDC Watershed System including the Wachusett and Quabbin Reservoirs and the Ware River.” Boston. 5 pp.

Metropolitan District Commission and Department of Fisheries and Wildlife, 1994. “Memorandum of Understanding Between the Metropolitan District Commission and Massachusetts Department of Fisheries and Wildlife and Environmental Law Enforcement, Public Access Board to Improve Public Access to Waters of the Commonwealth.” Boston. 4 pp.

Metropolitan District Commission Division of Watershed Management, Massachusetts Water Resources Authority, and Rizzo Associates, 1991. “Watershed Protection Plan for Quabbin Reservoir and Ware River Watersheds.” Submitted to Massachusetts Department of Environmental Protection. Boston. 220 pp.

Metropolitan District Commission Division of Watershed Management, Massachusetts Water Resources Authority, and CDM, 1998. “Watershed Protection Plan Update Wachusett Reservoir.” Boston. 230 pp.

Metropolitan District Commission Division of Watershed Management, 2000. “Watershed Protection Plan Update for Quabbin Reservoir and Ware River Watersheds.” Report in progress as of January 2000.

Mosisch, T.D., and Arthington, A.H. 1998. “The Impacts of Power Boating and Water Skiing on Lakes and Reservoirs.” Lakes and Reservoirs: Research and Management, 3, n. 1: 1-17.

New England Water Works Association, 1995. “Final Resolution and Policy Concerning Recreational Use of Public Water Supplies.” Journal of New England Water Works Association. June. pp. 166-168.

New York City, Department of Environmental Protection, Land Acquisition and Stewardship Program, 1999. “Preliminary Report on Recreational Use of New York City Water Supply Lands.” MOA Deliverable, Article III, Paragraph 73. Shokan, NY. 91 pp.

O’Connor, Robert, et al., 1988. “Quabbin and Ware River Watersheds, Recreation and Public Access Policy and Plan.” Metropolitan District Commission Division of Watershed Management. Boston. 153 pp.

O’Connor, Robert and Zilligen, Jeanne. 1993. “Public Access Plan for the MDC Sudbury Watershed.” Metropolitan District Commission Division of Watershed Management. Boston, MA. 120 pp.

O’Connor, Robert and Zilligen, Jeanne, 1996. “MDC Public Access Plan - Wachusett Watershed.” Metropolitan District Commission Division of Watershed Management. Boston, 219 pp.

Rarig, Alice, 1994. “Projection of the Population, Massachusetts Cities and Towns, 1990-2010.” Massachusetts Institute of Social and Economic Research (MISER), University of Massachusetts, Amherst, MA. 440 pp.

Read, Clif (MDC/DWM), 1999. Personal communication, September.

MDC/DWM Public Access Management Plan Update - Ware River Watershed January 2000

_____, 1999. "Long Pond User Survey." Metropolitan District Commission Division of Watershed Management, Belchertown, MA. 8 pp.

Rose, J., 1994. "Microbial Threats to Watersheds Associated with Waterborne Disease." Prepared for Camp, Dresser and McKee, Boston. 44 pp.

Rose, J.B., et al., 1991. "Survey of Potable Water Supplies for *Cryptosporidium* and *Giardia*." Environmental Science Technology, Vol. 25, pp. 1393-1400.

Tobiason, J.E., et al., 1998. "Final Report - Contaminant Transport Modeling and Water Quality in Quabbin Reservoir - Phase II." Environmental Engineering Program, Department of Civil and Environmental Engineering, University of Massachusetts, Amherst, MA. 205 pp.

Safe Drinking Water Act of 1974. P.L. 93-523, 93rd Congress (Dec. 16, 1974).

Safe Drinking Water Act Amendments of 1996

Steinberg, Philip, and Clark, George, 1999. "Troubled Water? Acquiescence, Conflict and the Politics of Place in Watershed Management." Political Geography, (18): 477-508.

Stern, Paul and Fineberg, H., eds., 1996. Understanding Risk - Informing Decisions in a Democratic Society. Committee on Risk Characterization, Commission on Behavioral and Social Sciences and Education, National Research Council, National Academy Press, Washington, D.C. 249 pp.

Surface Water Treatment Rule (SWTR). Promulgated in June 1989.

United States Army Corps of Engineers, 1986. "Rules and Regulations Governing Public Use of Corps of Engineers Water Resources Development Projects." EP-1165-23165.

United States Bureau of Land Management, 1991. "Access Management Policy." Wyoming State Office, place published. 8 pp.

United States Department of the Interior, Bureau of Land Management, 1996. "Public Land Access." BLM. Cheyenne. 21 pp.

_____, 1998. Access Management Policy. BLM. Cheyenne. 8 pp.

Winters, Lorraine, 1999. "Recreation and Public Water Supplies – Public Survey Results and Research." Columbus Division of Water, Watershed Management Section. Columbus, MA. 23 pp.


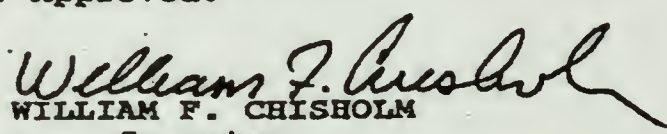

Zilligen, Jeanne, 1995. "Recreation Impact Survey." Metropolitan District Commission Division of Watershed Management, Boston. 16 pp.

MDC/DWM Public Access Management Plan Update - Ware River Watershed January 2000

APPENDICES

A. Appendix A - Public Access Policy Guidance Documents

Guidance Document 1 - MDC Commission Letter

	<p>The Commonwealth of Massachusetts Metropolitan District Commission 20 SOMERSET STREET BOSTON, MA 02108</p>	
ARGEO PAUL CELLUCCI GOVERNOR		TELEPHONE: (617) 727-5204
JANE SWIFT LT. GOVERNOR		FACSIMILE: (617) 727-7333
BOB DURAND SECRETARY		www.state.ma.us/mdc
DAVID B. BALFOUR, JR. COMMISSIONER	December 16, 1999	
<p>Watershed Management Division</p> <p>Dear Mr. McGinn:</p> <p>At the meeting of the Commission held on November 16, 1999, action was taken upon the following matter relating to the Watershed Management Division:</p> <p>"Report of Mrs. Overton Bussell and Messrs. McGinn and Pula, December 1, submitting for approval MDC/DWM Public Access Management Plan Update - Ware River Watershed. The Commission V O T E D: Approved."</p> <p> WILLIAM F. CHISHOLM Secretary</p> <p>jmcc</p> 		

Guidance Document 2 - US EPA Letter



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
JOHN F. KENNEDY FEDERAL BUILDING
BOSTON, MASSACHUSETTS 02203-0001

April 16, 1999

OFFICE OF THE
REGIONAL ADMINISTRATOR

The Honorable Edward M. Kennedy
United States Senator
JFK Federal Building, Room 2400
Boston, MA 02203

Dear Senator Kennedy:

Thank you for your letter of March 19, 1999, conveying certain concerns of the Ware River Watershed Horse Association (WRWHA) and requesting an EPA response. Ms. Erica A. Gross of the WRWHA wrote to you expressing her organization's desire for a relaxation in the limitations imposed by the Metropolitan District Commission (MDC) on recreation on lands the MDC owns in the watershed of the Ware River, which helps to supply the MDC-managed Wachusett and Quabbin Reservoirs. It should be noted at the outset that it is the MDC (not the EPA) that sets land use restrictions on MDC land. That being said, EPA does have views and concerns about such restrictions as they may affect drinking water quality and public health.

Ms. Gross explains that the MDC's main reservation about allowing greater freedom for recreational horseback riding in the Ware River Watershed is concern that this activity may contribute pathogenic protozoan parasites of *Cryptosporidium* and *Giardia* to public drinking water supplies. Ms. Gross quotes statements from a letter dated December 5, 1995, by J. Kevin Reilly of EPA's New England office as one source of the MDC's concerns, and goes on to cite recent research by Dr. Edward R. Atwill of UC Davis Center for Equine Health as supporting the conclusion that horses are not a source of these pathogens and that recreational restrictions may be lifted. Based on Dr. Atwill's study, Ms. Gross argues that, "[with the completion of new research [by Dr. Atwill], . . . the EPA should re-evaluate their position concerning the threat to the water supply due to parasitic contamination from horses."

Having considered the information provided by Ms. Gross concerning Dr. Atwill's work, as well as other scientific information, the EPA cannot change its present view that horses pose a potential threat of pathogenic contamination to surface waters. Mr. Reilly's letter of December 1995 was based on a number of articles implicating mares and foals as sources of *Cryptosporidium* and *Giardia*. A 1996 article demonstrates the possibility of infection in foals (see enclosed articles). Indeed, information quoted in Ms. Gross's letter acknowledges that horses are capable of shedding *Cryptosporidium* and/or *Giardia*. While it is true that a low percentage of horses may be infected, we also believe it to be true that horses remain a potentially significant source of microbial contamination. Although Dr. Atwill's research suggests that horses may not be a significant source of *Cryptosporidium* and *Giardia* contamination, it still does indicate that horses are a potential source of these pathogens.

Internet Address (URL) • <http://www.epa.gov>

Recycled/Recyclable • Printed with Vegetable Oil Based Inks on Recycled Paper (Minimum 25% Postconsumer)

It is also important to note that the threat of water supply contamination from horses is a threat that can be reduced at the present time by restrictions on where people ride their horses. This is unlike other known sources of *Cryptosporidium* and *Giardia* that cannot easily be controlled such as, to quote from Dr. Atwill's article, "various wildlife including deer, mice, squirrels, racoons, opossums and rabbits," not to mention muskrats, beavers, birds, domestic animals and problem septic systems. Thus, while the MDC is also doing what it can to attempt to improve protection against these other contaminant sources, it is appropriate that it address horses, too. In her letter, Ms. Gross states that the ratio of horses to people in the Ware River watershed is approximately one to four. According to MDC figures there are 96.3 square miles in the Ware River watershed with a population density of 77 people per square mile. This suggests that there are approximately 19.25 horses per square miles in the watershed or 1,854 horses in the Ware River watershed. This is a substantial number of horses.

Unfortunately, I cannot at this time in good conscience support a relaxation of measures designed to try to help protect water quality in the watersheds of the Wachusett and Quabbin Reservoirs and the Ware River. These three watersheds supply drinking water to more than 40 communities, 180,000 businesses, and 2.5 million people. Neither the Wachusett nor the Quabbin Reservoirs are treated with a multiple barrier treatment system including filtration treatment which removes pathogens from the water. This is less of a concern with respect to the Quabbin Reservoir because it has a well-protected watershed characterized by little development and it has reported consistent compliance with applicable water quality-related criteria. The Massachusetts Department of Environmental Protection (DEP) found in 1992 that the Quabbin Reservoir met standards allowing it not to be filtered and authorized reliance solely on disinfection for treatment. The lack of filtration treatment must, however, be of great concern to EPA with respect to the Wachusett Reservoir.

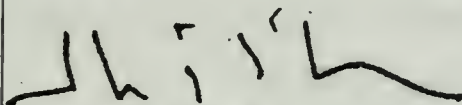
The watershed of the Wachusett Reservoir is characterized by significant development and numerous uncontrolled sources of microbiological contamination to the water, ranging from septic systems, to road runoff, to birds, livestock and wild and domestic animals. The Wachusett Reservoir watershed and water supply system has never met the standards for remaining unfiltered. The Massachusetts Water Resource Authority's Wachusett water supply continues not to be adequately disinfected, it has experienced numerous violations of the unfiltered system criterion for compliance with the total coliform bacteria Maximum Contaminant Level, and it recently, once again, violated the standard for fecal coliform bacteria levels in the source water from the reservoir. The fecal coliform standard serves as a warning indicator of the presence in the water of a wide range of microbial pathogens from warm-blooded animals that are capable of passing through the MWRA's disinfection process. In 1992, the DEP, with EPA's (and even the MWRA's) agreement, found that the Wachusett supply should be both filtered and disinfected. Now the state has changed its position and despite the violations of applicable standards, the DEP in December 1998 reversed its earlier determination and gave the MWRA state approval not to filter Wachusett water and instead to rely solely on disinfection for treatment. Obviously, EPA strongly disagrees with the DEP's failure to enforce the Surface Water Treatment Rule for the Wachusett Reservoir and require the improved safety that filtration treatment would provide. As a result, consumers of Wachusett water are being subjected to greater risk than the Safe Drinking Water Act and EPA regulations intended. That is why the United States has filed a law suit attempting to compel compliance with this basic public health protection requirement.

In these circumstances, where the MWRA is not meeting standards and does not have adequate treatment in place, EPA cannot urge the MDC to relax restrictions on activities on its own land that are intended to try to reduce contaminant loadings to the water supply. While I am in basic agreement with the WRWHA's contention that a watershed that does not directly supply drinking water to consumers ought to be available for certain limited recreational uses, we cannot overlook the fact that the Ware River does supply water to consumers when it is used to augment the Quabbin and Wachusett Reservoirs. Given the concerns expressed above about the threat of contamination from horses and other sources, and the MWRA's inadequate treatment system, I simply cannot support steps that would further increase the risk to the public. At present, I must regard the WRWHA's call for the MDC to allow increased equine recreational activity on MDC-owned lands in the Ware River watershed as such a step.

If adequate treatment were in place, together with continued strong watershed protection, it might then be appropriate to consider easing certain specific restrictions on recreational activities that could otherwise threaten public health. It is unfortunate that water quality and treatment issues must result in limitations on the ways in which residents and visitors can take advantage of beautiful public land in the Ware River Watershed. Yet, when the public is not even receiving the level of protection promised by the Safe Drinking Water Act and EPA regulations, we cannot endorse steps to increase risks further. Our obligation is to do the best we can to protect the public health, including for those who cannot afford to choose bottled water or home treatment devices.

If you have any questions about the above, you or your staff should feel free to call me or Kevin Reilly of my staff at (617) 918-1694.

Sincerely,



John P. DeVillars
Regional Administrator

Enclosures

cc: Ms. Erica Gross, WRWHA

Guidance Document 3 - New England Water Works Association Resolution

PROCEEDINGS**NEW ENGLAND WATER WORKS ASSOCIATION, INC.****NEWWA's RESOLUTION & POLICY CONCERNING RECREATIONAL USE OF
PUBLIC WATER SUPPLIES****Approved by the Board of Directors****December 21, 1995****WHEREAS:**

It is a fundamental principal of water supply development and protection that water should be obtained from the highest quality source feasible, and effort should be made to prevent or control pollution of that source, and

Public water suppliers support the concept of multiple barrier protection of drinking water supplies in order to maximize public health protection by:

1. Source water protection,
2. Treatment, which may include filtration,
3. Preservation of finished water,
4. Monitoring,
5. Training and certification; and

WHEREAS:

During the past twenty years or more, there has been a tremendous increase in the demand for water based outdoor recreation, and

Public water supplies are often cited as prime areas for the development of recreation interests and facilities, and

The proponents of recreational use of water supplies often base their arguments on the excellent health record and quality of the finished water and not on the raw water which varies with the degree of human activity, and

WHEREAS:

The absence of waterborne disease in a community is not a viable reason for the relaxation of measures to protect a water supply, and

Public health records indicate that waterborne diseases have not been eliminated, and

There have been past experiences of gross water pollution where recreational use of water supplies was allowed, and

WHEREAS:

In New England, public water supply reservoirs are known to comprise only a small percentage of the total surface water area but provide drinking water to 80% of the region's population, and are therefore not forced to accept the concept of multiple use of water supply reservoirs as with reservoirs in other regions of the country, and

PROCEEDINGS

In the West, public water supply reservoirs are known to comprise a large percentage of the total surface water area, limiting the availability of recreational facilities, and

The State and Federal governments have spent billions of dollars to build sewage treatment facilities to make many previously polluted surface waters available for recreation, and

WHEREAS:

Water treatment facilities and the individuals who operate and maintain those facilities are not infallible, and

The legal and moral responsibility of providing a safe, high quality drinking water rests with the local water supply agency and water supply manager.

NOW, THEREFORE, BE IT RESOLVED:

That the New England Water Works Association (NEWWA) opposes legislation or *any* administrative action which will permit or require the opening of domestic water supply reservoirs and adjacent lands to recreational use, and

That the official policy of the NEWWA with respect to recreational usage of various types of water supply reservoirs and adjacent lands is as follows:

1) **EQUALIZING RESERVOIRS** - Reservoirs within the area served, delivering finished water (water ready for consumption) to the distribution system.

POLICY - Consistent with good water supply practices, equalizing reservoirs should be covered to preserve the quality of finished water and minimize the risk to public health. Recreational use of "equalizing reservoirs" and adjacent land is contrary to the basic function of protecting the public health by furnishing a safe, palatable water supply to customers and safe practice requires prohibition of *all* activity in and about such reservoirs.

2) **TERMINAL AND PRIMARY STORAGE RESERVOIRS** - Reservoirs and reservoir system components providing principal and/or end storage of water prior to treatment and delivery of finished water to the distribution system.

POLICY - Recreational use of terminal reservoirs and adjacent land is contrary to the basic function of furnishing a safe, palatable water supply to customers and should be prohibited to the greatest extent possible, but, in no event should direct contact with the reservoir be allowed. In addition, activities allowed to occur on adjacent lands should prohibit direct contact with water in the reservoir.

3) **UPSTREAM RESERVOIRS** - Reservoirs providing storage of water at various points in the watershed to supplement the terminal and primary storage reservoirs.

POLICY - Recreational use of upstream reservoirs should be subject to such limitations and controls as the water supplier considers necessary for preventing interference with its obligations to produce a safe, palatable water supply, in accordance with the applicable requirements for the protection of public health and drinking water as set forth by the regulating agency with oversight of drinking water supplies and responsible for administration and enforcement of state and federal drinking water regulations. The water supplier should reserve and exercise the final authority and responsibility to determine the terms and conditions under which specific recreational activity may be authorized.

PROCEEDINGS

4) **EMERGENCY & RESERVED SOURCES OF SUPPLY** - There are numerous surface waters which are designated for use as emergency or standby reserved sources of water supply. Even though the frequency of use of such sources for consumption may be low, and may be accompanied by additional extraordinary measures to protect public health in the event of their use (e.g. boil water orders, disinfection or other emergency treatment measure), it is recommended that water suppliers have plans prepared to control use and access to such sources at or before such time they are proposed to be used. The plans for such use and access should consider the category of reservoir the emergency or reserve source falls within with respect to the consumer and apply the policy recommended for such category of reservoir as presented above.

IN ADDITION, IT IS RECOMMENDED that all proposals to allow recreation activities on a water supply reservoir or within the watershed and other contributing sources to a water supply reservoir should be reviewed for consistency with watershed protection plans and policies to ensure that such proposed activities do not conflict with measures required to protect a water supply or water supply watershed.

A proponent of recreational use of a public water supply must be required to provide technical evidence supporting the claim that such activity will not adversely affect the water quality, public health and safety of the water consumer served by said water supply. When a proposal for recreational use inconsistent with this policy is proposed for implementation over the objection of the water supplier, the matter of recreational use should be subjected to public review and hearing.

Water utilities and its rate payers should not bear the burden of financing recreational use; other sources of financing must be determined.

Guidance Document 4 - AWWA

AWWA Government Affairs

Recreational Use of Domestic Water Supply Reservoirs

Adopted by the Board Guidance Document 5 - American Water Works

Association Guidance of Directors June 13, 1971 and reaffirmed Jan. 28, 1979 and Jan. 25, 1987

AWWA supports the principle that water of highest quality should be used as the source of supply for public water systems. Because each water utility is responsible for its product, determination of type and extent of recreational use of impounding reservoirs should be vested in the water utility.

Water utilities of the United States and Canada have consistently and reliably provided high-quality drinking water to many generations of consumers. In order to continue this outstanding record, each water utility must continue to recognize its responsibility to deliver a safe and appealing product to its consumers. A growing demand for use of reservoirs for recreational purposes, however, may make this responsibility more difficult to carry out in the future.

It should be recognized that uncontrolled recreational use of domestic water supply reservoirs may result in degradation of water quality and conflicts with management practices needed to control water quality. Reservoir management practices in the provision of a water supply for domestic use are often not compatible with those for recreational use of reservoirs. For example, uncontrolled recreational use of reservoirs can result in deteriorated water quality that increases the potential for waterborne disease to occur. In addition, the use of chemicals to control nuisance organisms and plants in reservoirs may conflict with recreational activities such as fishing. Considerations such as these should be carefully evaluated prior to allowing recreation on domestic water supply reservoirs.

It should be the vested responsibility of water utilities to determine the use of their reservoirs. The decision concerning recreation should be based on state or provincial and local laws and regulations, on information provided by AWWA, the Environmental Protection Agency and other organizations that conduct research and present technical reports, and on an assessment of the public need for the fuller utilization of water resources. Research on the effects of recreation on water quality should be expanded. Recreational users of water supply reservoirs must receive close supervision. The impact of swimming, boating, and fish enhancement programs requires close monitoring. In all cases, water from reservoirs used for recreation must be treated, with the degree of treatment to be determined according to state or provincial and local utility laws, regulations, and policies. The public must recognize that recreational use of reservoirs may result in added capital and operating costs that may either increase the charges for water or be borne by the recreational user.

Public water supply reservoirs should not be used for recreation if other surface waters are available. Body-contact sports, such as swimming, should not be allowed in reservoirs designed, financed, and built solely for public water supply. For the purpose of this policy statement, reservoir means an impoundment reservoir subsequent to which water receives treatment before consumption. Distribution reservoirs from which water is supplied directly to the public require the strictest of controls and under no condition should be used for recreation.

Guidance Document 5 - Massachusetts Watershed Protection Regulations

WATERSHED PROTECTION ACT REGULATIONS**350 CMR 11.00**

Division of Watershed Management, Metropolitan District Commission

Section

- 11.01: Introduction and Purpose
- 11.02: General Provisions
- 11.03: Definitions
- 11.04: Jurisdiction
- 11.05: Exemptions
- 11.06: Procedures
- 11.07: Maps
- 11.08: Relationship of Act with other State and Municipal Statutes, Ordinances and Regulations
- 11.09: General Rules and Regulations for the Protection of Watersheds and the Watershed System
- 11.10: Enforcement
- 11.11: Miscellaneous
- 11.12: Severability
- 11.13: Forms

11.01: Introduction and Purpose

(1) Introduction - 350 CMR 11.00 is promulgated by the Commissioners of the Metropolitan District Commission pursuant to the authority granted under St. 1992 c. 36. St. 1992 c. 36, § 2 amends M.G.L. c. 92, § 104 by adding certain definitions which are used in 350 CMR 11.03; St. 1992 c. 36, § 3 adds M.G.L. c. 92, § 107A defining the jurisdiction and exemptions contained in 350 CMR 11.04 and 350 CMR 11.05, respectively; and St. 1992 c. 36, § 4 amends M.G.L. c. 92, § 108 by requiring the Division of Watershed Management, after consultation with the Department of Environmental Protection, to make rules and regulations for the protection of Watersheds as defined in St. 1992 c. 36.

In addition, St. 1992 c. 36 and M.G.L. c. 92 authorize the Metropolitan District Commission and the Division of Watershed Management to make rules and regulations to protect the Watersheds as defined in St. 1992 c. 36 and the Watershed System as defined in St. 1992 c. 36 and M.G.L. c. 92. The Department of Environmental Protection is also required under St. 1992 c. 36, § 14 to adopt rules and regulations for the prevention of pollution and securing the sanitary protection of all waters used as sources of water supply in the Commonwealth other than in the Watersheds as defined in St. 1992 c. 36. Regulations currently exist for: (a) the sanitary protection of waters used by the Metropolitan District Commission (310 CMR 23.00); (b) land within Watershed Reservations (350 CMR 8.00); (c) sanitary rules and regulations for the Metropolitan Water Supply (350 CMR 9.00); and (d) fishing in Wachusett and Sudbury Reservoirs (350 CMR 10.00).

In order to facilitate review of all regulations promulgated by the Metropolitan District Commission and the Division of Watershed Management relating to Watersheds and the Watershed System, 350 CMR 11.09 includes regulations of general applicability to Waters of the Watershed System. The regulations in 350 CMR 11.09 are intended to supersede the regulations in 310 CMR 23.00, 350 CMR 8.01, 350 CMR 9.00, and 350 CMR 10.00, which shall be repealed on March 31, 1994.

(2) Purpose - The purpose of St. 1992 c. 36 is to improve the protection of the metropolitan water supply. St. 1992 c. 36 and 350 CMR 11.00 set forth a comprehensive scheme to regulate land use and activities within certain critical areas of the Watersheds and Watershed System.

The purpose of 350 CMR 11.00 is to define and clarify the restrictions and prohibitions set forth in St. 1992 c. 36 by establishing standard definitions and procedures under which the Division of Watershed Management may carry out its responsibilities under St. 1992 c. 36. 350 CMR 11.00 shall complement St. 1992 c. 36 and shall have the force of law on March 31, 1994.

11.02: General Provisions

(1) Time Periods. Unless otherwise specifically provided in St. 1992 c. 36 or 350 CMR 11.00, computation of any time period referred to in 350 CMR 11.00 shall begin with the first day following the action which initiates the running of the time period. The last day of the time period so computed is to be included unless it is a Saturday, Sunday or legal holiday or any other day on which the office of the Division is closed, in which event the period shall run until the end of the next following business day. When the time period is less than seven days, intervening days when the Division is closed shall be excluded in the computation.

(2) Timely Filing. All Papers must be filed at the Division office or such other place as the Division shall specify in 350 CMR 11.00 within the time limits set forth herein.

Unless otherwise specifically provided in St. 1992 c. 36 or 350 CMR 11.00, Papers filed in the following manner shall be deemed to be filed as set forth herein:

(a) *Hand delivery during business hours*. By hand delivery during business hours shall be deemed filed on the day delivered.

(b) *Hand delivery during non-business hours*. By hand delivery at times other than during regular business hours shall be deemed filed on the next regular business day.

(c) *Mailing*. By placing in the United States Mail certified or registered mail, return receipt requested shall be deemed filed on the date received by the Division.

All Papers shall show the date received by the Division and the Division shall cooperate in giving date receipts to Persons filing Papers by hand delivery.

(3) Actions by the Division. Where St. 1992 c. 36 states that a particular action (except receipt of a request or notice) is to be taken by the Division, that action is to be taken by the person designated by 350 CMR 11.00 or, if by a committee, by more than half the members present at a meeting of at least a quorum. A quorum is defined as a Majority of the members then in office.

(4) Burden of Proof. Any Person who files a request for Advisory Ruling, a request for Watershed determination of applicability, an application for variance or a request for Exemption of a Tributary shall have the burden of producing credible evidence from a competent source in order to demonstrate to the Division or, in the case of an appeal, to the Commission, support for the position taken or the relief requested.

(5) Capitalized Terms. Any capitalized terms used in 350 CMR 11.00 shall have the meanings ascribed to such terms in 350 CMR 11.03.

11.03: Definitions

Advisory Ruling means a ruling issued by the Division pursuant to 350 CMR 11.06(1).

Agriculture, Land in Agricultural Use and Normal Maintenance or Improvement of Land in Agricultural Use shall have the meanings ascribed to such terms in 310 CMR 10.04.

Alteration means:

- (a) draining, dumping, dredging, damming, discharging, excavating, filling or grading;
- (b) the erection, reconstruction or substantial expansion of any buildings or Structures;
- (c) the driving of pilings;
- (d) the construction or reconstruction or paving of roads and other ways;
- (e) the construction or reconstruction of utilities;
- (f) the changing of run-off characteristics;
- (g) the intercepting or diverting of ground waters, surface waters, reservoirs, tributaries, or aquifers; and
- (h) the installation or substantial expansion of drainage, sewage and water systems.

Applicability Decision means the written decision issued by the Division pursuant to 350 CMR 11.06(2)(e).

Aquifer means a geological formation, group of formations, or part of a formation in the Wachusett Watershed that is capable of yielding a significant amount of water to a well or spring, as determined by reference to the Maps, 350 CMR 11.07. The land directly overlaying an aquifer shall be deemed to be part of said aquifer.

Authority means the Massachusetts Water Resources Authority.

Bank means the portion of the land surface which normally abuts and confines a water body. It occurs between a water body and a Bordering Vegetated Wetland and adjacent Flood plain, or in the absence of these, it occurs between a water body and an upland. A bank may be partially or totally vegetated or may be comprised of exposed soil, gravel or stone. The upper boundary of a bank is the first observable break in the slope or the mean annual flood level, whichever is lower. The lower boundary of a bank is the mean annual low flow level.

Bordering Vegetated Wetland means a wet meadow, except meadows used for the grazing of livestock, marsh, swamp, bog or other area, hydrologically connected to and bordering on a Tributary, Reservoir, Flood plain, or Surface Water, which supports at least 50% wetland species and as defined in the Wetlands Protection Act as defined herein.

Commission means the Metropolitan District Commission.

Commonwealth means the Commonwealth of Massachusetts.

Date of Issuance means the date a determination, order or decision is hand delivered or mailed as provided in 350 CMR 11.00.

Date of Submission means the date the Division assigns a file number to a request or application submitted pursuant to 350 CMR 11.06. Assignment of a file number shall not imply that a request, application or supporting documents have been determined adequate to support the relief requested, but only that the submission is complete in accordance with the requirements of 350 CMR 11.06.

Department means the Department of Environmental Protection of the Commonwealth of Massachusetts.

Discharge or Discharge of Pollutant means any addition of Pollutants or combination of Pollutants from any source including, but not limited to, discharges from surface runoff, which are collected or channelled by man and through pipes, sewers or other conveyances.

Disposal means the discharge, deposit, injection, dumping, spilling, leaking, incineration or placing into or on any land or water so that the matter disposed of may enter the environment or be emitted into the air or discharged into any waters, including Ground water.

Division means the Division of Watershed Management of the Commission.

Dwelling means any structure or building, or any portion thereof which is used, intended to be used, or designed to be occupied for human habitation purposes, including, but not limited to, houses, hotels, motels, apartments and condominiums.

Exemption Decision means a decision of the Division, in consultation with the Department, to exempt a Tributary from regulation under St. 1992 c. 36 issued pursuant to 350 CMR 11.06(4)(g).

Flood plain means the land adjoining a Tributary, Reservoir or Surface Water, which is subject to inundation from a flood having a 1% chance of being equalled or exceeded in any given year, commonly known as the 100 year flood plain, as determined by reference to the Maps, 350 CMR 11.07.

Generate or Generation of Pollutants means the origination, creation or production of Pollutants.

Ground water means water below the land surface in a saturated zone, including perched ground water.

Hazardous Material or Waste means any material or waste, in whatever form, which because of its quantity, concentration, corrosivity, flammability, reactivity, toxicity, or infectious, chemical or radioactive characteristics, either separately or in combination with any substance or substances, constitutes a present or potential threat to human health, safety, welfare, or to the environment. Hazardous Material or Waste shall include those materials listed in 40 CFR 261, or 310 CMR 40.900 Appendix I.

Impervious means not allowing entrance or passage of water due to the presence on or above the ground of material having a percolation rate of greater than 30 minutes per inch, including, but not limited to, pavement, concrete, stone, peat, loam and other organic matter.

Leaching Field means a soil absorption system as such term is defined in Title 5 (350 CMR 15.00).

List of Affected Parcels means the list developed by the Division from maps prepared pursuant to M.G.L. c. 92 § 107A(q).

Lot means an area of land subject to St. 1992 c. 36 in one ownership with definite boundaries described in a deed or shown on a plan recorded in the registry of deeds or registered in the registry district of the land court.

Maps means the maps described in 350 CMR 11.07.

Majority means more than half of the members of any body making a decision pursuant to 350 CMR 11.00.

Natural Basin means an area bounded peripherally by a water parting and draining ultimately to a particular water course or body of water; the catchment area or drainage basin from within which the waters of a stream or stream system are drawn.

Owning an Interest in Real Property or Real Property Interest means having alone, or jointly or severally with others:

- (a) legal title to real property;
- (b) the care, charge or control of real property in any capacity including, but not limited to as agent, executor, executrix, administrator, administratrix, trustee, or guardian of the estate of the holder of legal title;
- (c) lessee under a written lease; or
- (d) an agent, trustee or other person appointed by the Courts of the Commonwealth.

Papers means all requests, documents, papers, notices, appeals and other written communications permitted or required by the regulations to be filed with the Division or the Commission.

Party Aggrieved means any Person who, because of an act or failure to act by the Division or the Commission under St. 1992 c. 36 or 350 CMR 11.00, may suffer an injury in fact which is different, either in kind or magnitude, from that suffered by the general public, and which is within the scope of the interests identified in St. 1992 c. 36. Such party must specify, in writing, sufficient facts to allow the Division or the Commission to determine whether or not the party is, in fact, aggrieved.

Person means an individual, partnership, corporation, firm, association or group, including a city, town, county, the Commonwealth or other governmental unit owning property or carrying on an activity regulated by St. 1992 c. 36.

Plans means such data, maps, engineering drawings, calculations, specifications, schedules and other materials, if any, deemed necessary by the Division to describe the Lot, portion of the Lot or the Alteration to determine the applicability of St. 1992 c. 36 or to determine the impact of the Alteration upon the interests identified in St. 1992 c. 36.

Pollutant means any substance, man-made or resulting from human activities, that can alter the biological, chemical, physical, or radiological character of water.

Reservoir means either the Wachusett or the Quabbin Reservoir.

Sewage Treatment Facility means any wastewater treatment facility used for treating, neutralizing or stabilizing sewage, including: treatment or disposal plants; the necessary intercepting outfall and outlet sewers; pumping stations integral to such facilities; and equipment and appurtenances related to the foregoing.

Sewer System means pipelines or conduits, pumping stations, force mains, and all other structures, devices, appurtenances, and facilities used for collecting and conveying wastes to a site or works for treatment or disposal.

Storage means the actual or intended containment on a temporary basis or permanent basis which does not constitute Disposal.

Structure means a combination of materials assembled at a fixed location to give support or shelter, such as, but not limited to, a Dwelling, a building, framework, retaining wall, tent, reviewing stand, platform, bin, fence over six feet high, sign, flagpole, recreational tramway, mast for radio antenna or the like. The word "structure" shall be construed, where the context requires, as though followed by the words "or part or parts thereof."

Subsurface Waste Water Disposal System means an on-site subsurface sewage disposal system as defined in Title 5 (310 CMR 15.00).

Surface Water(s) means water in the Watersheds, including any lake, spring, impoundment, and pond, as determined by reference to the Maps, 350 CMR 11.07. Surface water shall include the land located thereunder and the Banks thereto. Surface water shall exclude all Reservoirs, Tributaries, Aquifers, Ground waters, and man-made farm ponds used for irrigation, as well as so-called great ponds of the Commonwealth which do not drain into a Tributary or a Reservoir.

Title 5 means Title 5 of the Massachusetts Environmental Code governing standard requirements for the siting, constructing, repair, replacement and maintenance of on-site sewage treatment and disposal systems, 310 CMR 15.00.

Treatment means any method, technique, or process, including neutralization, incineration, stabilization or solidification, designed to change the physical, chemical or biological character or composition of any Hazardous Material or Waste so as to neutralize such Material or Waste or so as to render such Material or Waste less hazardous, non-hazardous, safer to transport, amenable to storage, or reduced in volume, except such method or technique as may be included as an integral part of a manufacturing process at the point of generation.

Tributary means a body of running water, including a river, stream, brook and creek, which moves in a definite channel in the ground due to a hydraulic gradient and which flows ultimately into a Reservoir in the Watersheds or the Ware River above the Ware River intake, as determined by reference to the Maps, 350 CMR 11.07. A Tributary shall include the land over which the water therein runs and the Banks thereto.

Uses and Activities means those uses and activities described in M.G.L. c. 92, § 107A(a) and (b)(2) and 350 CMR 11.04(3).

Variance Decision means the written decision issued by the Division pursuant to 350 CMR 11.06(3)(g).

Waters of the Watershed System means all waters that in their natural course would flow into the Ware River above the Colbrook Diversion, the open channel of the Wachusett Aqueduct, the Quabbin, Wachusett, Sudbury and Foss reservoirs and any other lake, pond, reservoir, aqueduct, stream, ditch, watercourse or any other open water under the provision of M.G.L. c. 92, § 109.

Watershed Reservation(s) means land within the Watershed System and described in St. 1972 c. 737 as amended by St. 1990 c. 436.

Watershed(s) means the Natural Basin from within which water drains or in the natural course would drain into the Quabbin Reservoir, the Wachusett Reservoir, or the Ware River upstream of the Ware River intake.

Watershed System means:

(a) all real and personal property interests held by or on behalf of the Commonwealth immediately prior to the effective date of St. 1992 c. 36 in and for the Metropolitan District Commission water system which were part of or appurtenant to the Quabbin Watershed, Quabbin Reservoir, Ware River Watershed, Wachusett Watershed, Wachusett Reservoir, North and South Sudbury watersheds, Sudbury Reservoir, Framingham Reservoirs 1, 2 and 3, Blue Hills Reservoir, Bear Hill Reservoir, Spot Pond Reservoir, Fells Reservoir, Weston Reservoir, Norumbega Reservoir, Chestnut Hill Reservoir, including land, easements, buildings, Structures, all equipment, machinery, vehicles and appliances, improvements, water rights and rights in source of water supply; and

(b) all enlargements and additions to the former Metropolitan District Commission water system acquired or constructed by the Division for the purpose of the Watershed System, including land, easements, buildings, Structures, equipment, machinery, vehicles, and appliances, improvements, reservoirs, dams, water rights and rights in sources of water supply, but excluding the Waterworks System of the Authority.

Waterworks System means waterworks system as defined in M.G.L. c. 92 App. and 360 CMR 10.00 et seq.

Wetlands Protection Act means the Wetlands Protection Act, M.G.L. c. 131, § 40 and regulations promulgated pursuant thereto, 310 CMR 10.00 et seq.

11.04: Jurisdiction

(1) Areas Regulated. Areas regulated by St. 1992 c. 36 and 350 CMR 11.00 include those portions of the Watersheds which lie:

- (a) within 400 feet of the Bank of a Reservoir;
- (b) within 200 feet of the Bank of a Tributary or Surface Waters;
- (c) within the area between 200 and 400 feet of the Bank of a Tributary or Surface Waters;
- (d) within the Flood plain of a Tributary or Surface Waters, including that flood plain;
- (e) within Bordering Vegetated Wetlands that border on Tributaries or Surface Waters or Reservoirs;

(f) within land that overlays an Aquifer with a potential well yield of 100 gallons per minute or more as determined in accordance with St. 1992 c. 36 and 350 CMR 11.00; or

(g) within land that overlays an Aquifer with a potential well yield of one or more but less than 100 gallons per minute pursuant to a finding by the Division, in consultation with the Department, that regulation of said Aquifer is necessary for the protection of the quality of the water in the Surface Waters, Aquifers, Reservoirs or Tributaries.

(2) Presumptions - Properties Identified in the List of Affected Parcels. For purposes of 350 CMR 11.00, all properties identified in the List of Affected Parcels shall be presumed to be in an area regulated under 350 CMR 11.04(1)(a) through (g). Any property which is not identified in the List of Affected Parcels shall be presumed not to be in an area regulated under 350 CMR 11.04(1)(a) through (f).

(3) Uses and Activities Regulated or Prohibited.

(a) Any Alteration, or the Generation, Storage, Disposal or Discharge of Pollutants is prohibited within those portions of the Watershed that lie:

1. within 400 feet of the Bank of a Reservoir (350 CMR 11.04(1)(a)); or
2. within 200 feet of the Bank of a Tributary or Surface Waters (350 CMR 11.04(1)(b)).

(b) 1. Within those portions of the Watershed that lie:

- a. within the area between 200 and 400 feet of the Bank of a Tributary or Surface Water (350 CMR 11.04(1)(c));
- b. within the Flood plain of a Tributary or Surface Water (350 CMR 11.04(1)(d));
- c. within Bordering Vegetated Wetlands that border on Tributaries or Surface Waters or Reservoirs (350 CMR 11.04(1)(e));
- d. within land that overlays an Aquifer with a potential well yield of 100 gallons per minute or more as determined in accordance with St. 1992 c. 36 and 350 CMR 11.00 (350 CMR 11.04(1)(f)); or
- e. within land that overlays an Aquifer with a potential well yield of one or more but less than 100 gallons per minute, pursuant to a finding by the Division, in consultation with the Department, that regulation of said Aquifer is necessary for the protection of the quality of the water in the Surface Waters, Aquifers, Reservoirs or Tributaries (350 CMR 11.04(1)(g)),

2. the following uses are prohibited:

- a. the Disposal of Pollutants from either privately or publicly owned Sewage Treatment Facilities;

- b. the placement of the Leaching Field of a Subsurface Waste Water Disposal System less than four feet above the maximum water table level as measured at the time of annual high water;
- c. the storage of liquid petroleum products of any kind; provided, however, that an end user of such product, such as a resident in connection with normal residential use or a person responsible for supplying heat to a residence, may store a reasonable volume of such material so long as such storage is in a free standing container inside of the Structure, which Structure shall include at a minimum a foundation thereof with a poured cement slab floor or a concrete reservoir of sufficient volume to hold 125 percent of the tank's capacity;
- d. the Treatment, Disposal, use, generation or Storage of Hazardous Material or Waste, except a reasonable volume of Hazardous Material or Waste incidental to normal residential use;
- e. the Storage and the Disposal of solid waste other than a reasonable volume incidental to normal residential use;
- f. the outdoor Storage of road salt or other de-icing chemicals; provided, however, that 350 CMR 11.00 shall not prohibit the outdoor Storage of sand, gravel or materials used in road construction which are not Hazardous Materials or Waste;
- g. the outdoor Storage of fertilizers, herbicides and pesticides;
- h. the use or Storage of pesticides or herbicides which carry a mobility rating as provided for by the United States Environmental Protection Agency or which have been determined by the Commonwealth using United States Environmental Protection Agency standards to pose a threat or potential threat to Ground water;
- i. the outdoor, uncovered Storage of manure;
- j. the servicing, washing or repairing of boats or motor vehicles other than as reasonably incidental to normal residential use;
- k. the operation of junk and salvage yards;
- l. the rendering Impervious of more than ten percent of any Lot or 2,500 square feet, whichever is greater;
- m. the excavation of gravel and sand to a depth greater than six feet above the maximum water table, except where incidental to the construction of permitted Structures;
- n. the Alteration of Bordering Vegetated Wetlands;
- o. any other activity which could degrade the quality of the water in the Watersheds as determined by the Division after consultation with the Department; provided, however, that de-icing may be performed on a roadway under procedures approved by the Commonwealth's Secretary of Environmental Affairs; or

p. the construction of any Dwelling which exceeds a density of two bedrooms per acre or any use which may generate more than 220 gallons of sanitary sewage per acre per day.

(c) In addition to, and without limiting, the prohibitions contained in 350 CMR 11.04(3)(a) and (3)(b), within those portions of the Watersheds which overlay Aquifers with potential well yields of between 100 and 300 gallons per minute as determined by the Division, or land whose regulation has been determined to be necessary for the protection of the quality of the water in the Surface Waters, Aquifers, Reservoirs and Tributaries, pursuant to 350 CMR 11.04(1)(g), the construction of any Dwelling which exceeds a density of one and one-third bedrooms per acre and any use which may generate more than 147 gallons of sanitary sewage per acre per day are prohibited.

(d) In addition to, and without limiting, the prohibitions contained in 350 CMR 11.04(3)(a), (3)(b) and (3)(c), within those portions of the Watersheds that overlay Aquifers with potential well yields of over 300 gallons per minute as determined by the Division, the construction of any Dwelling which exceeds a density of one bedroom per acre and any use which may generate more than 110 gallons of sanitary sewage per acre per day are prohibited.

(e) In making the calculation required under 350 CMR 11.04(3)(b)2.i. all contiguous real property within an area described in 350 CMR 11.04(1) owned by the same Person shall be used, in the aggregate; provided, however, that said area may be so used in making such calculation for only one Lot.

(f) In making the calculation required under 350 CMR 11.04(3)(b)2.p., all contiguous real property within an area described in 350 CMR 11.04(1) owned by the same Person shall be used, in the aggregate, to determine the total acreage for density purposes; provided, however, that said area may be so used for determining area density for only one Lot.

11.05: Exemptions

The provisions of 350 CMR 11.04 shall not apply to the following:

(1) Uses, Structures or Facilities in Existence. Uses, Structures or facilities lawfully in existence or for which all applicable municipal, state and federal permits and approvals, other than building permits and permits for septic systems, were obtained prior to July 1, 1992;

(2) Reconstruction, Extension or Structural Change. Any reconstruction, extension or structural change to any Structure lawfully in existence on July 1, 1992, provided that such reconstruction, extension or structural change:

(a) does not constitute a substantial change to or enlargement of that lawfully existing Structure; and

(b) does not degrade the quality of the water in the Watershed;

(3) Lot in Existence. The construction of one single-family Dwelling on any Lot existing as such prior to July 1, 1992, or the division of an owner occupied Lot existing as such as of July 1, 1992 into one additional Lot for a single family dwelling; provided that, wherever

possible, there shall be no Alterations within the areas described in 350 CMR 11.04(1)(a) and 11.04(1)(b);

(4) Construction - Sewer System. The construction of any Dwelling described in 350 CMR 11.04(3)(b)2.p., 11.04(3)(c) or 11.04(3)(d) if a Sewer System existed prior to July 1, 1992 to which a direct connection shall be made without expansion of capacity and said connection is used for all sanitary sewage of any Dwelling or other Structure resulting from said construction;

(5) Tributaries. Tributaries, or portions thereof, which the Division, in consultation with the Department, has exempted pursuant to 350 CMR 11.00, upon a determination that such exemption will pose no significant risk to the quality of the water, after taking into account the rate of flow, slope, soil characteristics, proximity to a Reservoir or the Ware River above the Ware River intake, the current level of water quality and the current degree of development;

(6) Work of the Division. The Division, in the performance of its responsibilities and duties to protect the quality of the water in the Watersheds, or the Authority in the performance of its responsibilities and duties to maintain, operate and improve the Waterworks System;

(7) Conversion of Land for Agricultural Use. Conversion of Land for Agricultural Use or preparation of Land for Agricultural Use; provided, however, that such conversion shall be made under a plan approved by the United States Department of Agriculture, Soil Conservation Service and the Commission, in consultation with the Commonwealth's Department of Food and Agriculture;

(8) Maintenance of Public Roadways in Existence. The maintenance, repair, replacement or reconstruction of public roadways existing as of September 1, 1989 or railroad track and rail bed existing as of September 1, 1990, including associated drainage systems, that are necessary to preserve or restore the facility's serviceability for the number of travel lanes and uses existing as of September 1, 1990; provided, however, that in the case of any replacement the design is substantially the functional equivalent of, and is of similar alignments to that which is being replaced; provided, further, that design plans and specifications for said work on roadways, or railroad track and rail beds are provided to the Division prior to the work's commencement;

(9) Maintenance or Improvement - Agricultural. Activities relating to normal maintenance or improvement of Land in Agricultural Use; provided, however, that such activities do not impair the quality of the water;

(10) Construction of Public Highways. The construction of public highways, railroad track and rail beds and facilities directly related to their operation; provided, that the Commonwealth's Secretary of Environmental Affairs has determined that such highway or transportation service construction project requires direct access to or location in the lands described in 350 CMR 11.04(1) to avoid or minimize damages to the environment and that said Secretary and the Division have determined that such construction does not materially impair the quality of the water in the Watersheds;

(11) Maintenance of Public Utilities. The maintenance, repair or expansion of lawfully located Structures or facilities used in the service of the public to provide electric, gas, water, sewer, telephone, telegraph and other telecommunication services; provided, however, that such maintenance, repair or expansion activities, Structures, or facilities do not materially impair the quality of water in the Watersheds as determined by the Division after consultation with the Department;

(12) Maintenance of Public Utilities - Wetlands. The maintenance, repair or replacement, but not the substantial changing or enlargement of, an existing and lawfully located Structure

or facility used in the service of the public and used to provide electric, gas, water, sewer, telephone, telegraph and other telecommunication services in Bordering Vegetated Wetlands; provided, however, that such maintenance and repair activities do not materially impair the quality of water in the Watersheds;

(13) Clean up or Prevention of Releases. The undertaking by any Person, municipality, the United States government or the Commonwealth of temporary operations to clean up, prevent or mitigate releases of Hazardous Material or Waste;

(14) Changes in Agricultural Crops Produced. Changes in agricultural crops produced;

(15) Agricultural Technologies. The use of new or existing agricultural technologies that do not degrade the quality of water in the Watersheds more than the present agricultural technologies that such new or existing agricultural technologies replace; and

(16) Municipal Sewage Treatment Facility or Water System. The construction of a new municipal Sewage Treatment Facility or new municipal water system if the Division determines that water quality will not be adversely impacted from said construction and provided that such new systems comply with all existing regulations and standards applicable to water pollution abatement districts.

11.06: Procedures

(1) Advisory Rulings

(a) *Request for Advisory Ruling*. Any person Owning an Interest in Real Property may, by written request to the Division at the addresses specified in 350 CMR 11.11 by certified mail or hand delivery, request an Advisory Ruling as to:

1. whether such Person's property is located within an area regulated by St. 1992 c. 36 or 350 CMR 11.00; or
2. whether existing or proposed Structures, Uses or Activities on such Person's property are permitted under St. 1992 c. 36 or 350 CMR 11.00 by virtue of the exemptions set forth in 350 CMR 11.05.

(b) *Information Required*. Such written request shall identify the property by street address and include:

1. a copy of the current Assessor's Map showing the location of the property or reference to the applicable Assessor's Map by sheet and parcel number;
2. a copy of (or reference to) the most recent edition of the Massachusetts Geographic Information System map based on the United States Geological Survey, 1 to 25,000 scale, quadrangle maps, showing the location of the property;
3. a copy of such Owner's deed as recorded in the applicable registry of deeds; and
4. copies of any plans, mortgage inspection plans and tape surveys of the property which are available.

(c) *Issuance of Advisory Ruling*. Within 30 days of the Date of Submission of a request for Advisory Ruling, the Division may issue a written ruling to the Person who submitted the request, or in its sole discretion, the Division may notify such

Person that a request for Watershed determination of applicability is required pursuant to 350 CMR 11.06(2).

(d) *Remedy.* The Person to whom an Advisory Ruling is issued shall have no right to appeal such ruling, but may at such Person's election, submit a request for Watershed determination of applicability or an application for variance in accordance with 350 CMR 11.00. A Person who has not been issued an Advisory Ruling within 30 days may, at such Person's election, resubmit the request, or submit a request for Watershed Determination of Applicability or an application for variance in accordance with 350 CMR 11.06.

(e) *Authorization; limitations.* Any Advisory Ruling hereunder shall be issued by the Division pursuant to and subject to the limitations of M.G.L. c. 30A, § 8.

(2) Requests for Watershed Determinations of Applicability

(a) *Filing.* Any Person Owning an Interest in Real Property who desires a determination as to whether or not:

1. such Person's property is located within an area regulated by St. 1992 c. 36 or 350 CMR 11.00;
2. proposed Structures, Uses or Activities on such Person's property are permitted under St. 1992 c. 36 or 350 CMR 11.00;
3. a reconstruction, extension or structural change constitutes a substantial change or enlargement or one which will degrade the quality of water under 350 CMR 11.05(2);
4. Alterations within areas described in 350 CMR 11.04(1)(a) and 11.04(1)(b) in connection with construction permitted under 350 CMR 11.05(3) are possible;
5. the maintenance, repair or replacement activities described in 350 CMR 11.05(9), (10) or (11) will impair or materially impair the quality of the water in the Watersheds; or
6. a new municipal Sewage Treatment Facility or new municipal water system will have an adverse impact on water quality under 350 CMR 11.05(16),

may submit to the superintendent of the Reservoir of the Watershed in which such property is located at the address specified in 350 CMR 11.11, by certified mail or hand delivery, a request for Watershed determination of applicability (See 350 CMR 11.13).

(b) *Land Surveyor Determination.* Any request for Determination under 350 CMR 11.06(2)(a)1. shall be accompanied by a written determination of a land surveyor registered with the board of registration of professional engineers and land surveyors of the Commonwealth as to whether such Person's real property interests are located within areas regulated by St. 1992 c. 36.

(c) *Related Statement.* Requests for Watershed Determinations other than those in 350 CMR 11.06(2)(a)1. shall include a detailed description of the Structures, Uses and Activities which are proposed.

(d) *Additional Materials.* All surveys and additional materials or studies required to make a determination, whether or not requested by the Division, shall be prepared and delivered at the sole cost of the Person desiring the determination.

(e) *Issuance of Applicability Decision.* Within 60 days of the Date of Submission of such request for Watershed Determination, the Division shall issue a written Applicability Decision to the Person who submitted such request, in form suitable for recording in the registry of deeds or registration in the registry district of the land court where the property is located (See 350 CMR 11.13), which shall contain a brief statement of the reasons for the Decision. If the Division fails to issue the Applicability Decision within such 60 day period, the Division shall be deemed to have:

1. concurred with the land surveyor's determination set forth in a request for Determination under 350 CMR 11.06(2)(a)1.; or
2. determined that the proposed Structures, Uses and Activities on such Person's property described in the request for Determination are permitted by St. 1992 c. 36 and 350 CMR 11.00; or
3. determined that such Structures, Uses and Activities will not impair or materially impair the quality of water in the Watersheds.

(f) *Appeal.* A Person to whom the Division's Applicability Decision has been issued, who seeks to appeal such Decision, shall file a Notice of Claim for an Adjudicatory Proceeding with the Commission at the address specified in 350 CMR 11.11 within 21 days from the Date of Issuance of the Decision by the Division. The procedures for appeal before the Commission shall be as set forth in 801 CMR 1.00 et seq. At the time of filing of such Notice of Claim, a copy shall also be filed with the Division.

(3) Variances

(a) *Variances.* The Division may grant a variance from the provisions of St. 1992 c. 36 and 350 CMR 11.00 with respect to particular Structures, Uses and Activities, and shall grant, upon request, a variance with respect to crossings of Tributaries and Bordering Vegetated Wetlands, where the Division specifically finds that owing to circumstances relating to the soil conditions, slope, or topography of the land affected by such Structures, Uses or Activities, desirable relief may be granted without substantial detriment to the public good and without impairing the quality of water in the Watersheds.

(b) *Presumptions and Standards for Required Findings.*

1. There shall be a presumption that granting a variance from the applicability of St. 1992 c. 36 and 350 CMR 11.00 to specific Structures, Uses and Activities is contrary to the achievement of the purpose of St. 1992 c. 36. This presumption may be rebutted only by the submission of credible evidence by the Person submitting the application for variance to establish that such variance may be granted without substantial detriment to the public good and without impairment of water quality in the Watersheds.
2. The standard of substantial detriment to the public good shall mean a factual determination by the Division of the overall effect of the proposed Structure, Use or Activity at a particular location in relation to the purpose of St. 1992 c. 36.

3. The standard of impairment of water quality shall mean:
 - a. the risk of water quality impairment presented by Structures, Uses and Activities which are permissible under all other relevant federal, state and local laws, but would not be permissible under 350 CMR 11.00 without a variance; and
 - b. the cumulative risk of water quality impairment from all Structures, Uses and Activities allowed under current regulations over time.

(c) *Applications.* Any Person Owning an Interest in Real Property may make an application for variance to the Division (See 350 CMR 11.13) by filing the same by certified mail or hand delivery with the Division at the address specified in 350 CMR 11.11. A copy of the application for Variance shall be sent to the Department at the address specified in 350 CMR 11.11.

(d) *Detailed Statement.* The application for variance shall include a detailed description of the Structures, Uses and Activities proposed on such Person's property. The application for variance shall include detailed information regarding each specifically enumerated factor stated in 350 CMR 11.06(3)(a). Detailed information regarding each factor shall be provided as follows:

1. *Soil Conditions.* A map prepared at a minimum scale of 1"=100' indicating the soil types as mapped by the USDA Soil Conservation Service ("SCS") shall be provided. Site specific soils data, including borings, test pits and percolation tests, may be submitted including copies of all field logs, notes, observations, conclusions and test methods employed. A detailed analysis of the soil characteristics of erodibility and permeability shall be provided. Permeability should be described in terms of percolation rate measured as minutes per inch as specified in Title 5 (310 CMR 15.00).
2. *Slope.* Calculations of the ground slope at all lands within the areas that would be subject to St. 1992 c. 36 if the variance were not granted shall be provided. The results of such calculations shall be presented graphically on a map prepared at a scale of 1"=100' or larger, expressed as percent slope. Where applicable, the average slope of a Tributary measured as the change in elevation divided by the distance in stream miles from the upstream point of the Tributary at or near such Person's property to the downstream point of the Tributary at or near such Person's property shall also be stated.
3. *Topography.* A topographical plan at a minimum scale of 1"=100' or larger showing contour elevations at two foot intervals shall be submitted. Said plan shall be prepared and stamped by a professional surveyor or engineer registered in the Commonwealth of Massachusetts and shall show the location of all areas which would be subject to St. 1992 c. 36 if the variance were not granted. The plan shall show the location of all Ground water, soil and percolation test locations. Such topographic information as depth to the maximum annual high Ground water table, depth to ledge or refusal, and distances from all mapped and unmapped streams, ponds and water bodies shall also be provided.
4. *Water Quality.* The application shall include a detailed analysis of the impacts on Surface Water and, where applicable, Ground water quality of any proposed Structure, Use or Activity which would be allowed if the variance is granted. An evaluation of the potential impact of such proposed Structure, Use or Activity on water quality by reference to the Department's

Surface Water Quality Standards for Class A Surface Waters and Outstanding Resource Waters of the Commonwealth, set forth in 314 CMR 4.00 et seq., and/or where applicable, the Massachusetts Ground Water Quality Standards, set forth in 314 CMR 6.00 et seq. shall be provided. The application shall include the water quality data and results to support each analysis and shall provide a detailed description of any methodology employed in performing such analysis to show that water quality will not be impaired by the Structure, Use and Activity for which the variance is being requested, whether during construction or upon continued use or operation of such Structure, Use or Activity.

5. *Mitigating Measures.* The application shall include an analysis of any mitigating measures which will be used which would enable the Division to grant a variance without substantial detriment to the public good and without impairing the quality of water in the Watersheds.

(e) *Additional Materials.* All surveys and additional materials or studies required to act on an application for variance, whether or not requested by the Division, shall be prepared and delivered at the sole cost of the Person submitting the application.

(f) *Public Hearing.* Within 30 days of the Date of Submission of the application for variance with the Division, the Division shall hold a public hearing. Notice of the time and place of the public hearing shall be given by the Division, at the expense of the Person who submitted the application, not less than five days prior to such hearing by publication in a newspaper of general circulation in the city or town where the property in question is located and by mailing a copy of such notice to the Person who submitted the application at the address specified in the application, and to the Building Inspector, Conservation Commission, and Board of Health in such city or town. At the request of the Person who submitted the application filed with the Division at least two days before the date of such hearing, the date of the hearing may be rescheduled to a time which is mutually convenient for such Person and the Division, provided that such rescheduled time shall permit re-publication of notice as provided herein. The public hearing may be continued, with the consent of the Person who submitted the application, to an agreed upon date, which shall be announced at the hearing. At the public hearing, such Person may be represented by counsel and/or professional consultants and may present oral or written evidence and oral or written testimony of witnesses.

(g) *Variance Decision.* Within 30 days of the close of the public hearing, the Division shall issue a written Variance Decision on the application for variance. If the variance is granted, the Division may impose in the Variance Decision such reasonable conditions, safeguards and limitations as it may find desirable in its sole discretion, which, based on the application for variance and the evidence presented at the public hearing, are necessary to protect the water in the Watersheds. If a variance is denied, the Variance Decision shall contain a brief statement of the reasons for the denial. The granting of a variance is limited to the provisions of St. 1992 c. 36. All other applicable laws, regulations and ordinances shall not be affected by the granting of a variance.

(h) *Recording of Variance Decision.* No variance granted hereunder shall take effect until a Variance Decision (See 350 CMR 11.13) shall have been recorded and indexed in the grantor index in the registry of deeds or registered in the registry district of the land court for the county or district where the property is located, containing any conditions applicable thereto and describing the land by metes and bounds or by reference to a recorded or registered plan showing the property's boundaries.

(i) *Appeal.* A Person to whom a Variance Decision is issued, who seeks to appeal the Division's Variance Decision, shall file a Notice of Claim for an Adjudicatory Proceeding with the Commission at the address specified in 350 CMR 11.11 within 21 days from the Date of Issuance of the Variance Decision by the Division. The procedures for appeal before the Commission shall be as set forth in 801 CMR 1.00 et seq. At the time of filing of such Notice of Claim, a copy shall also be filed with the Division.

(4) Exemption of a Tributary

(a) *Exemption of a Tributary.* The Division, in consultation with the Department, may exempt a Tributary, or portions thereof, upon a determination that such exemption will pose no significant risk to the quality of water, after taking into account the following factors:

1. rate of flow;
2. slope;
3. soil characteristics;
4. proximity to a Reservoir or the Ware River above the Ware River intake;
5. the current level of water quality; and
6. the current degree of development.

(b) *Presumptions and Standards for Required Findings.*

1. The standard of no significant risk to the quality of water refers to:
 - a. the risk of water quality impairment presented by Structures, Uses and Activities which are permissible under all other relevant state, federal and local laws, but would not be permissible under 350 CMR 11.00 without an exemption; and
 - b. the cumulative risk of water quality impairment from all Structures, Uses and Activities allowed under current regulations over time.
2. There shall be a presumption that exempting a Tributary or portion thereof is contrary to the achievement of the purpose of St. 1992 c. 36. The presumption may be rebutted only by the submission of credible evidence by the Person submitting the request for Exemption to establish that such exemption will pose no significant risk to the quality of water, taking into account the factors enumerated at 350 CMR 11.06(4)(a).

(c) *Requests for Exemption.*

1. A request for Exemption of a Tributary may be made by:
 - a. An affected landowner;
 - b. Any state agency or regional planning commission;
 - c. The Board of Selectmen, City Council, Mayor, Planning Board or Conservation Commission of any city or town which would be affected by the exemption; or
 - d. The Governor or any member of the General Court.

2. A request for Exemption of a Tributary shall be made to the Division (See 350 CMR 11.13) by filing the same by certified mail or hand delivery with the Division at the address specified in 350 CMR 11.11. A copy of the request for Exemption of a Tributary shall be sent to the Department at the address specified in 350 CMR 11.11.

(d) *Detailed Statement.* The request for Exemption of a Tributary shall include detailed information regarding each specifically enumerated factor listed in 350 CMR 11.06(4)(a)1. through 6. Such detailed information shall be provided based on conditions existing as of the time of the request and based on conditions which would, or may, result if such exemption were granted and if development occurred to the maximum extent and type allowed by current law. Detailed information on each factor shall be provided as follows:

1. *Flow Rate.* The request shall include the flow rate of the Tributary stated as the annual average daily stream flow, reported as cubic feet per second ("cfs") as measured at the downstream point of discharge for the Tributary or portion thereof, taking into account the entire contributing drainage area. Such flow rate may be based on field data collected in accordance with accepted stream flow measurement methods as established by the United States Geologic Survey, or estimated based on procedures established by the United States Geologic Survey. The request shall describe, in depth, the basis and method employed for the reported flow rate to assess full build-out scenarios.

2. *Slope.* The request shall state the average slope at the Tributary measured as the change in elevation divided by the distance in stream miles from its source to the downstream point of discharge. The ground slope of all lands adjacent to the Tributary within the areas that would be subject to St. 1992 c. 36 if the exemption were not granted shall be calculated and the results of such calculations shall be presented graphically on a map prepared at a scale of 1"=100' or larger, expressed as percent slope.

3. *Soil Characteristics.* A map prepared at a minimum scale of 1"=100' shall be submitted indicating the soil types as mapped by the SCS. Site specific soils data supporting or contradicting the SCS soil mapping including borings, test pits and percolation tests may be submitted including copies of all field logs, notes, observations, conclusions and test methods employed. A detailed analysis of the soil characteristics of erodibility and permeability shall be provided. Permeability should be described in terms of a percolation rate measured as minutes per inch as specified in Title 5 (310 CMR 15.00).

4. *Proximity to a Reservoir or the Ware River above the Ware River Watershed.* Proximity of the Tributary proposed to be exempted to a Reservoir or the Ware River above the Ware River intake shall be indicated by reference to the Protection Zone, defined by the Department's Division of Water Supply, Watershed Resource Protection Plan Policy as Zone A, Zone B and Zone C. The measured distance in stream miles from the downstream discharge point of the Tributary or portion thereof in question from that Tributary's ultimate point of confluence with a Reservoir or stream miles above the Ware River intake shall be stated.

5. *Water Quality.* The request shall include water quality monitoring data for the Tributary consisting of, at a minimum, monthly samples for a continuous one year period at a sampling station located at or near the downstream point of discharge of the Tributary or portion thereof for which

exemption is requested. Water quality data of the Division and the Department may be utilized in satisfaction of this requirement where such data is available. Minimum analysis shall include fecal coliform bacteria, color, turbidity, temperature, pH, dissolved oxygen, total suspended solids, total phosphorus, ammonia nitrogen and chloride. A detailed analysis of the water quality data with reference to the Department's Surface Water Quality Standards for Class A Surface Waters and Outstanding Resource Waters of the Commonwealth, 314 CMR 4.00 et seq., shall be provided. The request shall include a detailed analysis of the impact on water quality of any potential Structures, Uses or Activities allowed if the exemption is granted.

6. *Development.* A general plan showing existing land use within the contributing drainage area upstream at the point of discharge of the Tributary or portion thereof shall be provided. The request shall include a calculation of the percent imperviousness of the contributing drainage area based on the existing land uses shown and shall indicate the change of percent imperviousness which may result from any Structures, Uses or Activities allowed or proposed if the exemption is granted.

7. *Other Information.* The request shall include a detailed description of the Structures, Uses and Activities which are or may be proposed to occur within those areas which would be subject to St. 1992 c. 36 without the exemption and shall include an analysis of any mitigating measures which will be used which would ensure that granting the exemption would present no substantial risk to the quality of water.

(e) *Additional Materials.* All surveys and additional materials or studies required to act on a request for Exemption of a Tributary, whether or not requested by the Division, shall be prepared and delivered at the sole cost of the Person submitting the request.

(f) *Public Hearing.* Within 30 days of the Date of Submission of the request for Exemption of a Tributary with the Division and the Department, the Division and the Department shall hold a public hearing. Notice of the time and place of the public hearing shall be given by the Division, at the expense of the Person who submitted the request, not less than five days prior to such hearing by publication in a newspaper of general circulation in the city or town where the property in question is located and by mailing a copy of such notice to the Person who submitted the request at the address specified in the request, and to the Building Inspector, Conservation Commission and Board of Health in such city or town. At the request of the Person who submitted the request filed with the Division at least two days before the date of such hearing, the date of the hearing may be rescheduled to a time which is mutually convenient for such Person, the Division and the Department, provided that such rescheduled time shall permit re-publication of notice as provided herein. The public hearing may be continued, with the consent of the Person who submitted the request, to an agreed upon date, which shall be announced at the hearing. At the public hearing, such Person may be represented by counsel and/or professional consultants and may present oral or written evidence and oral or written testimony of witnesses.

(g) *Exemption Decision.* Within 60 days of the close of the public hearing, the Division shall issue a written Exemption Decision on the request for Exemption of a Tributary. If the exemption is granted, the Division may impose in the Exemption Decision such reasonable conditions, safeguards and limitations as it may find desirable in its sole discretion, which, based on the request for Exemption of a Tributary and the evidence presented at the public hearing, are necessary to protect

the water in the Watersheds. If the exemption is denied, the Exemption Decision shall contain a brief statement of the reasons for the denial. The granting of an exemption is limited to the applicability of St. 1992 c. 36. All other applicable laws, regulations and ordinances shall not be affected by the granting of an exemption.

(h) *Notice of Exemption.* Notice of the Exemption Decision shall be mailed to the Person who submitted the request, and to the City Council or Board of Selectmen in the city or town where the Tributary is located. Notice shall also be published once in a newspaper of general circulation in such city or town, provided, however, that a failure to publish shall not affect the validity of the Exemption Decision. A record of the Exemption Decision shall be kept on file with the Division and, if a Tributary or portion thereof is exempted, the affected area shall be shown on the most recent edition of the Massachusetts Geographic Information System Map (See 350 CMR 11.07).

(i) *Appeal.* A Person to whom an Exemption Decision is issued, who seeks to appeal the Division's Exemption Decision, shall file a Notice of Claim for an Adjudicatory Proceeding with the Commission at the address specified in 350 CMR 11.11 within 21 days from the Date of Issuance of the Exemption Decision by the Division. The procedures for appeal before the Commission shall be as set forth in 801 CMR 1.00 et seq. At the time of filing of such Notice of Claim, a copy shall also be filed with the Division.

(5) Work Pending Appeal of Applicability Decision, Variance Decision or Exemption Decision - No Alterations shall be made or Structures, Uses or Activities commenced until a final administrative or judicial determination has been made and all appeal periods shall have expired if the Division issues:

(a) an Applicability Decision that the property is located in an area regulated by St. 1992 c. 36, that the Structures, Uses or Activities proposed are prohibited by St. 1992 c. 36 under 350 CMR 11.04(3), or that the Structures, Uses or Activities will impair or materially impair the quality of water in the Watersheds; or

(b) a Variance Decision denying the variance requested in an application for variance; or

(c) an Exemption Decision denying a request for Exemption of a Tributary.

11.07: Maps

(1) Aquifers. The location and potential well yield of Aquifers shall be determined by reference to the most recent edition of maps generated by the Massachusetts Geographic Information System based on the United States Geological Survey Water Resource Atlases.

(2) Flood plains. The location of Flood plains shall be made by reference to the most recent edition of the Flood Hazard Boundary Maps issued by the Federal Emergency Management Agency.

(3) Surface Waters and Tributaries. The location of Surface Waters and Tributaries shall be determined by reference to the most recent edition of maps generated by the Massachusetts Geographic Information System based on the United States Geological Survey, 1 to 25,000 scale quadrangle maps.

(4) Adoption of More Accurate Maps. With respect to any of the maps referred to in 350 CMR 11.07, the Division, in consultation with the Department, may adopt more accurate maps pursuant to notice and a public hearing as provided by M.G.L. c. 30A. The Division

shall file any of such maps which are adopted with the Clerk of the House of Representatives and Clerk of the Senate and such maps shall not take effect until 90 days have elapsed from the time of said filing. Copies of maps which have taken effect shall be filed with the Chief Executive Officers of all cities and towns within the Watersheds, provided that the Division's failure to do so shall not invalidate the maps or any actions taken by the Division in connection therewith.

11.08: Relationship of Act with other State and Municipal Statutes, Ordinances and Regulations

350 CMR 11.00 is intended solely for use in administering St. 1992 c. 36; nothing contained herein should be construed as preempting or precluding more stringent protection of the areas regulated by St. 1992 c. 36 by other statutes, ordinances, by-laws or regulations. The duties and obligations imposed by St. 1992 c. 36 shall be in addition to all other duties and obligations imposed by any general or special law or regulation or any by-law, ordinance or regulation lawfully adopted pursuant thereto.

11.09: General Rules and Regulations for the Protection of Watersheds and the Watershed System

In order to facilitate review of all regulations promulgated by the Commission and the Division relating to Watersheds and the Watershed System, this Section includes regulations of general applicability to Waters of the Watershed System. The regulations in 350 CMR 11.09 are intended to supersede the regulations in 310 CMR 23.00, 350 CMR 8.01, 350 CMR 9.00, and 350 CMR 10.00.

(1) Waters of the Watershed System.

(a) No Person shall take or divert any Waters of the Watershed System of the Commission and no Person shall corrupt, render impure, waste or improperly use any such water.

(b) No Person shall:

1. engage in any construction activity involving filling, dredging, grubbing or altering land without adequate provisions to prevent erosion resulting in clay, silt or other turbidity laden waters from entering the Waters of the Watershed System;
2. construct, establish or maintain any agricultural facility or place where animal manure may be deposited or accumulated without adequate provision to prevent any manure or other Pollutant from flowing or being washed into the Waters of the Watershed System;
3. engage in any other activity which could degrade the quality of Waters of the Watershed System or interfere with their use as a source of water supply.

(c) No Person shall allow a condition to exist on such Person's property which could result in the direct or ultimate discharge of any Pollutant into the Waters of the Watershed System.

(d) Any records of any board of health or health agent concerning matters within the Watershed shall be open to inspection by the employees and agents of the Commission and the Department.

(e) Whenever an incident occurs, is likely to occur, or a situation exists that threatens to add Pollutants to the Waters of the Watershed System, the Person causing or contributing to the pollution or potential pollution shall notify the Commission and the Department immediately.

(2) Watershed System.

(a) General Regulations.

1. Entrance on and exit from land of the Watershed System shall be made through gates or other designated areas.
2. No Person is allowed within any land of the Watershed System, except from one hour before sunrise to one hour after sunset, unless authorized by a written permit from the Commission or its designee.
3. Powered boats are prohibited within the Waters of the Watershed System except in areas designated by the Commission or its designee.
4. All acts which pollute or may pollute the water supply are prohibited. No litter or refuse of any sort may be thrown or left in or on any land or water within any Watershed System. All Persons within said System shall use the sanitary facilities provided for public use.
5. All acts which injure the property of the Commonwealth are prohibited. No Person shall injure, deface, destroy, remove or carry off any property, real or personal, under the care and control of the Commission, including but not limited to, all historic artifacts and natural materials. The removal of gravel, topsoil, stones, boulders, or other earthen material is prohibited from the Watershed System except for removal for official use for land management purposes by Commission staff. No Person shall build or construct any object or structure of the property of the Commonwealth except with the written permission of the Commission or its designee.
6. Cooking and all fires are prohibited within the Watershed System.
7. No Person shall wade or swim in any reservoir except wading while using boots for the purpose of launching boats at designated boat launch areas.
8. No Person shall wade or swim in any Tributary or Surface Waters on or within the property of the Commonwealth except at areas designated by the Commission or its designee.
9. Organized sports activities, including but not limited to orienteering and baseball, are prohibited in the Watershed System except by written permit from the Commission or its designee.
10. Any violation of 350 CMR 11.09 will be deemed sufficient cause for revocation of fishing privileges for a period of time not less than one year from the time of violation. The Commission and its employees are not responsible for any damage to or loss of property sustained by fishermen, or for any injury or loss of life which may be incurred in connection with public use of the reservoirs and Watershed System.

11. Breach of peace, profanity or other disorderly conduct offensive to the general public is strictly prohibited within the Watershed system. Possession of and drinking of alcoholic beverages is prohibited within said System.
12. No Person shall drive a motorized vehicle within the Watershed System except upon roads authorized for such use by the Commission or its designee. Recreational vehicles are prohibited on all Watershed System property except the use of snowmobiles in areas designated by the Commission or its designee. Motor vehicles shall be parked only in areas designated by the Commission or its designee. Operators of motor vehicles shall obey all regulatory signs unless otherwise directed by a police officer or person in charge. No Person shall willfully obstruct the free passage of vehicles or Persons within the Watershed System. Vehicle access for official use may be granted by the Commission or its designee.
13. No Person shall bring any animal within any Watershed System property except for horses and dogs at the Ware River Watershed at areas designated by the Commission or its designee.
14. The use of bicycles, skis and other means of non-motorized transportation within the Watershed system shall be permitted only in areas designated by the Commission or its designee.
15. No Person, except in an emergency, shall bring, land or cause to descend within any Watershed System property any aircraft except with a written permit from the Commission or its designee.
16. Parades, games, fairs, carnivals, fishing derbies, bazaars, gifts or solicitations for raising or collecting funds shall not be permitted within the Watershed System without written approval of the Commission or its designee.
17. Lotteries, raffles, gambling and games of chance are prohibited; and no Person shall have possession of machinery, instruments or equipment of any kind for use of same in the Watershed System.
18. Public assemblies of more than 25 persons shall not be allowed within the Watershed System without a written permit from the Commission or its designee.
19. No Person shall engage in any business, sale or display of goods or wares within the Watershed System without a written permit from the Commission or its designee.
20. Commercial signs and advertising are prohibited in the Watershed System.
21. No Person shall have possession of or discharge any weapon, firearm, fireworks, or other explosive on or within the Watershed System except at times and areas designated by the Commission or its designee. All forms of target shooting are prohibited on or within the Watershed System.

22. No Person may hunt, shoot or trap animals on or within any Watershed System property except at times and in areas designated by the Commission or its designee.

23. All Persons within the Watershed System shall obey the lawful directions of regulatory signs, police officers or persons in charge, or of Federal or Commonwealth wardens or enforcement officers.

24. The Watershed System or parts thereof may be closed for public access at the discretion of the Commission or its designee when necessary to protect the lands and waters under the care and control of the Commission.

25. The possession of all types of metal detectors or similar devices is prohibited on all of the Watershed System property.

(b) Special Regulations for Quabbin Reservoir.

1. Persons in compliance with Commonwealth Fish and Game Laws and Regulations, will be allowed to fish from shore in areas designated by the Commission or its designee. A valid state fishing or sporting license is required by any Person renting or launching a boat at any Commission facilities subject to 350 CMR 11.09. Reasonable fees for the use of boats, for rental of outboard motors for fishing purposes, or use of Commission facilities including parking and boat ramps, may be charged by the Commission.

2. Persons permitted to fish from boats shall, at all times, be responsible for the sanitary condition of the boats. Persons under 16 years of age must be accompanied by a Person possessing a valid fishing license in order to boat on Quabbin Reservoir.

3. Only boats of a minimum length of 12 feet, and of a type considered safe by the Commission representative in charge, shall be used. No inboard motors, collapsible boats, sailboats, pontoon boats, square sterned canoes, or other similar craft will be permitted in the water, and no boats will be permitted in the water except in areas designated for boating by the Commission or its designee. Outboard motors shall have a rating of not more than one-half the BIA or OBC rated horsepower for the boat and shall not exceed 20 horsepower, except that outboard motors for Commission boats less than fourteen 14 feet six inches in length shall not exceed ten horsepower. Boats less than 14 feet six inches in length will be limited to three occupants, and boats of that length and in excess thereof may be licensed to carry four occupants. No boats shall carry more than four occupants. Canoes and jon boats of a minimum length of 12 feet, and of a type considered safe by the Commission representative in charge, shall be used and only in areas designated for boating by the Commission on Pottapaug Pond above the regulating dam and at Gate 31 above the regulating dam. Canoes less than 16 feet and jon boats less than 14 feet six inches in length will be limited to two occupants, and canoes and jon boats in excess thereof may be licensed to carry three occupants. All boats must be in compliance with current Commonwealth Boating Laws. All boats must be clean and contain no refuse of any kind. Commission personnel shall have the right to inspect all private boats launched at Commonwealth facilities and may deny access in order to protect water quality or the safety

of occupants. Chock blocks must be used on vehicles when removing boats from the Reservoir.

4. No Person shall operate a motor boat at a speed other than reasonable and proper or in such a manner as to annoy or endanger the occupants of other boats.

5. Fishing from the shorelines of the Quabbin Reservoir and its Tributaries within the Watershed System or from boats shall be allowed only during a season designated by the Commission or its designee. All privately-owned boats, motors and other equipment must be removed from the property of the Commission each day.

6. Boats shall not leave the mooring areas before dawn, and must return at the time posted at each mooring area. The beaching of boats at any point except at the designated mooring and landing areas is strictly prohibited, except in cases of extreme emergency.

(c) Special Regulations for Ware River.

1. Persons in compliance with Commonwealth Fish and Game Laws and Regulations will be allowed to fish in the Ware River in areas designated by the Commission or its designee.

2. Powered boats and powered canoes are prohibited within the Ware River Watershed Reservation.

(d) Special Regulations for Wachusett Reservoir.

1. Persons in compliance with Commonwealth Fish and Game Laws and Regulations will be allowed to fish from the shore of Wachusett Reservoir in areas designated by the Commission or its designee.

2. Boating is prohibited in Wachusett Reservoir.

3. Fishing from the shoreline of the Reservoir shall be allowed only during a season designated by the Commission or its designee.

(e) Special Regulations for Sudbury Reservoir.

1. Persons in compliance with Commonwealth Fish and Game Laws and Regulations will be allowed to fish from the shore of Sudbury Reservoir in areas designated by the Commission or its designee.

2. Boating is prohibited on Sudbury Reservoir except in areas designated by the Commission or its designee.

11.10: Enforcement

Any Person who, without lawful authority, takes or diverts any Waters of the Watershed System or corrupts or defiles any such Waters or any source of such Waters or who violates and refuses to comply with any rule, regulation or order of the Commission shall be subject to the fines set forth in M.G.L. c. 92, § 111. The provisions of 350 CMR 11.00 shall be enforced upon petition of the Commission or of any town or Person interested by the Supreme Judicial Court or Superior Court or any justice of either court as provided in M.G.L. c. 92, § 112. In addition, upon written request by the Division, the Department shall have the authority to enforce the provisions of St. 1992 c. 36 and 350 CMR 11.00 by all

legally permitted enforcement mechanisms including, but not limited to: issuing notices of noncompliance; convening pre-enforcement conferences; issuing water supply orders pursuant to M.G.L. c. 111, § 160; and imposing administrative penalties pursuant to M.G.L. c. 21A, § 16 and 310 CMR 5.00. Such written request by the Division to the Department may seek enforcement for a specified type of violation or area, for a designated group of cases or for an individual matter.

11.11: Miscellaneous

(1) Addresses - Offices of Division

Metropolitan District Commission
Quabbin Reservoir
485 Ware Road
Belchertown, Massachusetts 01007

Metropolitan District Commission
Wachusett Reservoir
P.O. Box 206
Clinton, Massachusetts 01510

(2) Address of Commission -

Metropolitan District Commission
First Floor
20 Somerset Street
Boston, Massachusetts 02108

(3) Address of Department -

Department of Environmental Protection
Commonwealth of Massachusetts
Regional Division
One Winter Street
Boston, Massachusetts 02108

(4) Access to Property by Division - Any Person making a request for Watershed determination of applicability, an application for variance or a request for Exemption to the Division shall, upon request, allow the Division or its duly authorized representatives to inspect the property in question in order to assist the Division in the determination which is to be made. Personnel of the Division may enter, at reasonable times, any property, public or private, for the purpose of investigating or inspecting any condition relating to the discharge or possible discharge of Pollutants into the Watershed System and may make such tests as may be necessary to determine the existence and nature of such discharge as provided in M.G.L. c. 21, § 4.

11.12: Severability

If any provision or any part of 350 CMR 11.00 or the application thereof is held to be invalid, such invalidity shall not affect any other provision of 350 CMR 11.00.

11.13: Forms

Forms for use under the Watershed Protection Act shall be as follows:

Form 1 - Request for Watershed Determination of Applicability

Form 2 - Applicability Decision

Form 3 - Application for Variance

Form 4 - Variance Decision for Recording in Registry of Deeds

Form 5 - Request for Exemption of a Tributary

Forms 1, 3 and 5 and a Guidance Document, which may be of assistance in completing the forms, may be obtained from the Division at the addresses specified in 350 CMR 11.11(1) and (2).

Guidance Document 6 - WRWAC

S 1194

Chapter 242.

THE COMMONWEALTH OF MASSACHUSETTS

In the Year One Thousand Nine Hundred and Ninety-five

AN ACT ESTABLISHING A WARE RIVER WATERSHED ADVISORY COMMITTEE.

Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows:

SECTION 1. Section 104 of chapter 92 of the General Laws, as appearing in the 1994 Official Edition, is hereby amended by inserting after the definition of "Tributary" the following definition:-

"Ware river watershed advisory committee", the committee established by section one hundred and fourteen A.

SECTION 2. Section 114 of said chapter 92, as so appearing, is hereby amended by striking out, in line 6, the words "and the Ware river watershed".

SECTION 3. Said chapter 92 is hereby further amended by inserting after section 114 the following section:-

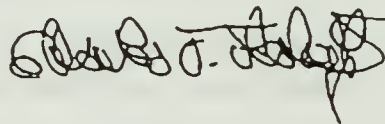
Section 114A. The commissioner is hereby authorized and directed to establish a Ware river watershed advisory committee. The purpose of the committee shall be to advise the division on its policies and regulations regarding recreational activities, land use and environmental, wildlife and habitat matters within the Ware river watershed. The commissioner of the metropolitan district commission shall appoint to said advisory committee one person from three names nominated by each of the following organizations: the Massachusetts Council of Sportsmen, the Worcester County League of Sportsmen, Trout Unlimited, a rod and gun club located in the town of Barre, Hubbardston, Oakham or Rutland, a designee of the board of selectmen of each of the towns of Barre, Hubbardston, Oakham and Rutland, a representative of the historical societies in each of the towns of Barre, Hubbardston, Oakham and Rutland, a representative of the Massachusetts Wildlife Federation, a representative of the Massachusetts Audubon Society, a representative of the Sierra Club, and a representative of the Upper Ware river watershed association and one member from the general public.

S 1194

participate fully in its meetings whenever a regular member is unable to do
so.

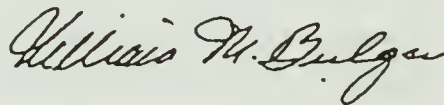
House of Representatives, November 13, 1995.

Passed to be enacted,

 Speaker.

In Senate, November 13, 1995.

Passed to be enacted,

 , President.

22 November, 1995.

Approved,

3:07 PM


Governor.

Guidance Document 7 - Chapter 737 Acts of 1972

ACTS, 1972. CHAP. 737.

659

years from their dates. The bonds or notes shall be signed by the county treasurer and countersigned by a majority of the county commissioners. The county may sell the said securities at public or private sale, upon such terms and conditions as the county commissioners may deem proper, but not for less than their par value. Indebtedness incurred hereunder shall, except as herein provided, be subject to chapter thirty-five of the General Laws.

SECTION 4. This act shall take effect upon its passage.

Approved July 17, 1972.

Chap. 737. AN ACT PROVIDING FOR THE CONSERVATION AND REGULATION OF CERTAIN LANDS UNDER THE CONTROL OF THE METROPOLITAN DISTRICT COMMISSION.

Be it enacted, etc., as follows:

SECTION 1. In this act, the following words and phrases, unless otherwise expressly provided or the context otherwise provides, shall have the following meanings:

"Commission", the metropolitan district commission.

"Commissioner", the commissioner of the metropolitan district commission.

"Ware river watershed", those parcels of land under the control of the commission and being situated wholly or partly in the towns of Rutland, Oakham, Barre, Hubbardston, Templeton and Princeton and being shown on plan of land entitled "Ware River Watershed, General Plan", dated November 22, 1965, Metropolitan District Commission, Commonwealth of Massachusetts, filed in the office of the commission.

"Quabbin reservoir area"; those parcels of land including the Prescott Peninsula, so-called, contiguous to the reservoir under the control of the commission and presently lying within the bounds of Routes 9, 32, 32A, 122 and 202 and being situated wholly or partly in the towns of Pelham, Belchertown, Ware, Hardwick, Petersham, New Salem and Shutesbury, and being shown on plan of land entitled "General Plan of Quabbin Reservoir Watershed, dated February 18, 1959, Metropolitan District Commission, Water Division, Quabbin Section, Commonwealth of Massachusetts", filed in the office of the commission.

"District", the combined lands identified in this act as the Ware river watershed and the Quabbin reservoir area, which are a portion of the total lands comprising the Quabbin section of the metropolitan water district.

SECTION 2. The natural ecology of the district shall be maintained, and it shall be conserved in its present degree of wilderness character and shall be protected in its flora and fauna in all reasonable ways to assure the balanced wildlife habitat and to allow camping with the approval of the district superintendent and in areas subject to his approval. Except as otherwise specifically authorized herein, no act or practice shall be undertaken which will adversely affect the balance of nature in the district. The commission shall make and promulgate such rules and regulations regarding the uses authorized herein as are reasonably necessary to conserve the wilderness, watershed and reservoir

SECTION 3. No lands or real property which are a part of the district shall be leased or sold or otherwise transferred without approval of the general court, nor shall there be any new or additional construction on said lands or real property except by the commission consistent with the purposes of this act.

SECTION 4. No new or additional roads or ways shall be constructed within the district, excepting only such ways as shall be required for forest management and fire control, or for watershed and reservoir purposes, nor shall existing soft surface roads or ways be hard surfaced, provided, however, that existing ways may be maintained and kept passable and in repair.

SECTION 5. The commission shall not permit the dumping of refuse or waste within the district except where such is allowed by permit granted by the commission prior to the effective date of this act for as long as such permit remains in effect, except, however, the commission may dispose of such refuse or waste resulting from normal operation of the district.

SECTION 6. No person shall take or remove and no town within the district shall authorize the taking or removal of sand, gravel, dirt or soil, nor any other mineral, from or within the district, except only that the commission may take such of these materials as are required for commission use within the district and may allow such use of these materials as may be required pursuant to section five.

SECTION 7. The commissioner, or his designee, shall annually prepare a plan detailing forestry activities, logging or lumbering activities, proposed plantings and the like which are to be undertaken for the next following year, which plan shall be open to inspection by the public.

SECTION 8. Lumbering or logging operations shall be permitted within the district to the extent and for the purpose of maintaining and conserving its forests in a healthful state of natural ecological balance consistent with reservoir and watershed purposes, but such lumbering and logging operations shall not be of a tree farming nature, so called, wherein natural diversification of tree species is upset nor wherein wildlife habitat or food chain growth is adversely affected. All lumbering or logging operations shall be performed under private contract pursuant to the bidding laws of the commonwealth the proceeds of which shall be used in whole or in part for the further management of the selfsame forests, excepting only for such emergency salvage operations as are deemed necessary by the forester, and with the further exception that the commission may take such lumber as is needed for its own use consistent with this act. All such lumbering or logging operations shall be supervised by the forester who shall designate cuttings and shall make and enforce such rules as are necessary regarding disposal of slash and toppings, construction of logging ways or ramps, or the like, to conserve said forests within the intent of this act. No tree shall be felled or cut within one hundred feet of any river or stream or flow line of reservoir or pond within the district which change the character of stream beds, except for such emergency or salvage cuttings as aforesaid.

SECTION 9. The public shall have access to the lands of the district for such recreational uses as are permitted by, and are consistent with the provisions of this act, except that the Prescott peninsula shall be set aside as a natural site for ecological and wildlife study and access thereto shall be regulated by the commission.

ACTS, 1972. — CHAP. 737.

661

SECTION 10. Hunting shall not be allowed in the Quabbin reservoir area, however hunting may be permitted within the Ware river watershed subject to the rules and regulations of the commission and the division of fisheries and game regulating hunting.

SECTION 11. Powered boats or powered canoes shall not be used anywhere within that portion of the Ware river lying within the present bounds of Routes 68, 62, 122, 122A and 56, nor shall all-terrain or amphibious vehicles be operated in, on or through the streams, ponds or other waters within these same bounds except for official use.

SECTION 12. There shall be no overnight camping within the Quabbin reservoir area nor within that portion of the Ware River Watershed defined in the first sentence of section eleven of this act, nor shall tents be erected nor trailers or other vehicular sleeping accommodation be parked overnight therein.

SECTION 13. Motor vehicles, snowmobiles and other recreational vehicles may be operated within the Ware River Watershed only upon established vehicular ways and trails, or in such other areas as shall be designated by the commission. Public entry to the Quabbin reservoir area shall be limited to foot passage only, except that motor vehicles and manually operated bicycles may be admitted to such roads and ways within the Quabbin reservoir area as shall be designated by the commission. There shall be no racing of motor driven vehicles within the district, nor shall any associated rallies or commercial ventures be held therein. Snow vehicles or all-terrain vehicles shall be permitted within the Quabbin reservoir area only for official use.

SECTION 14. Notwithstanding any other provision of this act the establishment, construction and operation by the University of Massachusetts, hereinafter referred to as the university, of an astronomical observatory may be continued in compliance with and pursuant to the permit granted November twenty-sixth, nineteen hundred and sixty-nine by the commission, to the university, provided that access to the site of the said astronomical observatory shall be limited to such access road as may be specifically designated by the commission for the purpose, and provided further that no person or equipment, other than construction, maintenance and repair personnel and equipment, operating personnel and equipment and such students in the field of astronomy as may be authorized by the university for the purpose, shall be entitled to be admitted to the aforesaid site except in accordance with and under the provisions of this act. Any such person so admitted shall be subject to supervision while on the site by an officer or official of the university designated for said purpose. Similarly, the construction, maintenance and operation of the United States Air Force antenna installations in compliance with and pursuant to the permit granted November twenty-sixth, nineteen hundred and sixty-nine may be continued under the agreements pertaining thereto.

SECTION 15. The provisions of this act and of all rules and regulations made under the authority thereof shall be enforced by the commissioner, his duly appointed agents, by metropolitan district commission police officers, by police officers of any city or town, by members of the state police and by enforcement officers of the department of natural resources.

Approved July 17, 1972.

Guidance Document 8 - Chapter 375 of Acts of 1926 (aka "Ware River Act")

ACTS OF 1926, CHAPTER 375.

AN ACT MAKING ADDITIONAL PROVISION FOR THE WATER SUPPLY NEEDS OF THE METROPOLITAN WATER DISTRICT AND OTHER COMMUNITIES WHICH NOW OR HEREAFTER MAY REQUIRE WATER THEREFROM, AND OF THE CITY OF WORCESTER.

Whereas, The deferred operation of this act would, in part, defeat its purpose, therefore it is hereby declared to be an emergency law necessary for the immediate preservation of the public convenience.

Be it enacted, etc., as follows:

SECTION 1. A special metropolitan district water supply commission is hereby established, consisting of the commissioner of the metropolitan district commission as chairman and of two associate commissioners to be appointed by the governor with the advice and consent of the council, said commission to be hereinafter referred to as the commission. The associate commissioners shall serve for terms of five years, or until their successors are appointed and qualified. The governor may with like advice and consent remove any associate commissioner and fill for any unexpired term vacancies which may occur in the associate commissionerships. The chairman shall receive in addition to his salary as commissioner of the metropolitan district commission the sum of twenty-five hundred dollars a year, and the associate commissioners shall each receive a salary of four thousand dollars a year. The commission may hire such offices and other quarters as may be needed for the conduct of its work. The commission may appoint a chief engineer, and with the advice

2

and consent of the governor and council may fix his salary.

The commission, on behalf of the commonwealth, shall forthwith for the purpose of extending and increasing the water supply of the metropolitan water system, and of such cities and towns not members of the metropolitan water district as may hereafter require water from said system, divert into the Wachusett reservoir of said district the flood waters, as defined in section four, of the Ware river at a point in the town of Oakham or the town of Barre not more than one mile from the bridge of the Boston and Albany railroad crossing said river in the village of Coldbrook, and construct as a part of the metropolitan water system, such works as may be necessary for such extension and increase, and all structures and appurtenances incidental or complementary thereto; provided, that said flood waters shall not be so diverted between May thirty-first and December first in any year unless such diversion be first approved by the state department of public health. Said works, and particularly the aqueduct or tunnel required for said diversion, shall be constructed at such grade and of such capacity and otherwise so that they can be used as a part of works that shall later be constructed for diverting into the Wachusett reservoir the waters of the Swift river, in substantial accordance with the plans and recommendations of the joint board on water supply needs and resources of the commonwealth as contained in its report to the general court in the year nineteen hundred and twenty-two, printed as house document number fifteen hundred and fifty of said year. All plans, maps and records of said joint board relating to the proposed extension to the Ware, Swift and Millers rivers shall be made available to the commission, and the department of public health shall, at the expense of the commission, furnish it, on request, with any information relative to said projects that said department may have in its

3

possession. In constructing the works herein authorized, the commission may adopt such emergency methods as in its opinion may be necessary or desirable to secure their completion as soon as the public necessity may require.

Said aqueduct or tunnel upon completion to said point of diversion and the diverting dam and other works and property incidental thereto, when completed shall be turned over to the metropolitan district commission, and shall be thereafter maintained by said commission as a part of the metropolitan water system under chapter ninety-two of the General Laws with all the powers and duties conferred by said chapter.

The commission established hereby shall annually, on or before January fifteenth, make a report, in conformity with the provisions of section thirty-two of chapter thirty of the General Laws, for the fiscal year ending on the thirtieth of November preceding, and said report shall be printed as a public document under section six of chapter five of the General Laws.

SECTION 2. In contracts entered into by the commission for the construction of the works herein authorized, there may be inserted a provision that the commission or any contractor or sub-contractor for the commission may employ laborers, workmen and mechanics for more than eight hours in any one day and for more than forty-eight hours in any one week in such construction, when, in the opinion of the commissioner of labor and industries, public necessity so requires. The commission may appoint and in its discretion remove such engineering, legal, clerical and other assistants as it may deem necessary to carry on the work herein authorized, and may fix their compensation in accordance with such rules and regulations as the commission may establish and as shall be approved by the governor and council. Such appointments shall not be subject to classification under sections forty-five to fifty, inclusive, of chapter thirty of the

4

General Laws, and chapter thirty-one of the General Laws shall not apply to removals, and, in accordance with such regulations as the commission may establish and as shall be approved by the governor and council, any appointment, including that of the chief engineer, may be wholly exempt from said chapter thirty-one. Upon request of the commission, the division of civil service shall hold special examinations.

SECTION 3. For the purpose of providing for the future extension of the metropolitan water system, the commission, on behalf of the commonwealth, may take by purchase or otherwise such lands, water rights, easements and other property in the watershed of the Swift river as it may deem necessary or desirable in preparation for the development of this river as a potential water supply for future use. The commission shall submit to the general court not later than the first Wednesday of January, nineteen hundred and twenty-seven, a draft of such legislation as it may deem necessary or advisable for the development of an adequate future water supply from the Swift river.

The commission shall also consider the recommendations of the metropolitan district commission relative to making available by filtration or chlorination, or both, the waters of the Sudbury and Cochituate watersheds as contained in house document number eleven hundred and ten of nineteen hundred and twenty-six and as referred to in the report of the metropolitan water supply investigating commission in house document number nine hundred of nineteen hundred and twenty-six; shall consider the effect on the present water supply of the metropolitan district of the addition thereto of water purified by filtration or other means and the effect of such water upon the present aqueducts, reservoirs and other facilities of the metropolitan water district; and shall report in detail plans and specifica-

5

tions for such land takings and for the construction of such additional works in the town of Framingham, and of such covered reservoirs as it may recommend, and the estimated expense thereof. The commission shall also consider and report on the amount of water which should be required for reasons of health and sanitation to flow below dam number one on the Sudbury river notwithstanding any provision of chapter one hundred and seventy-seven of the acts of eighteen hundred and seventy-two, and on all matters set forth in house document number ten hundred and forty-eight of nineteen hundred and twenty-six and the petition accompanying the same, especially the present and future water supply needs and resources of the town of Framingham, and the terms and conditions upon which said town should be entitled to receive water from the water supply now owned by the metropolitan district. The commission shall also consider and report upon the effect of the diversion for water supply purposes of the waters of the South Sudbury river upon public health in the town of Ashland, and whether or not a system of sewage disposal should be provided in said town in the event of such diversion. The commission shall report to the general court its findings and recommendations relative to the questions outlined in this paragraph, together with drafts of such legislation as may be necessary to effect its recommendations, by filing the same with the clerk of the house of representatives not later than December first of the current year, and it shall at the same time file a copy thereof with the budget commissioner.

SECTION 4. For the purposes of this act, the flood waters of the said Ware river which the commission is authorized to divert as provided in section one are hereby defined to be the waters thereof at and above the point of diversion established under section one in

6

excess of a flow of eighty-five million gallons a day, meaning thereby that on any day when the natural flow of said river is less than eighty-five million gallons no water shall be diverted.

The commission shall establish and maintain proper gauging stations or such suitable regulating devices as may be convenient and practical to establish the aforesaid limit of diversion with reasonable accuracy. Copies of all records obtained at such stations or by such devices shall be open to inspection during reasonable office hours and information shall be furnished, from time to time whenever reasonably requested, to any person owning or operating any mill or manufacturing establishment below the point of diversion or taking, or to the mayor of any city or the chairman of the board of selectmen of any town bordering on said river.

The waters of said Ware river and its tributaries at or above the point of diversion established as aforesaid, other than those authorized to be taken by the provisions of this act, and other than those waters not so taken which are needed for the processes of industry or for reasons of public health, are within its contemplation to be, when and as hereafter authorized by the general court, available for the domestic and public water supply of the city of Worcester and of the towns within the watershed of said river and its tributaries.

SECTION 5. For any of the purposes of this act, the commission, on behalf of the commonwealth, may at any time and from time to time take by eminent domain or acquire by purchase or otherwise the flood waters, as hereinbefore defined, of the Ware river and its tributaries, or any of said flood waters, at or above the point of diversion established under section one, and all water rights, water sources, lands, rights of way, easements and other interests in land, including any cemetery, that may be deemed by the commission to

7

be necessary or desirable for any of said purposes, or for the further protection of the purity of the waters to be diverted under this act.

Any taking under this act may be in fee or otherwise perpetual in duration or for a limited period of time according as the commission shall determine and set forth in the order of taking.

All takings under this act and all proceedings in relation to or growing out of the same shall conform to the provisions of chapter seventy-nine of the General Laws, except in the following particulars:

(a) The commission need make no award of damages sustained by persons or corporations in their property by any such taking.

(b) The notice required by section eight of said chapter may be given at any time within one year after the recording of the order of taking as provided in section three of said chapter.

(c) Petitions for the assessment of damages under section fourteen of said chapter may be filed within two years after the recording of the order of taking provided for in said section three, but petitions for the assessment of damages for the taking of rights of diversion may be filed within two years after, and not before, the actual diversion. The last six lines of section sixteen of said chapter seventy-nine, beginning with the word "but" in line three, shall have no application to takings under this act.

(d) For all property taken under this act, except rights of diversion, the right to damages shall vest upon the recording of the taking in the registry of deeds. For taking of rights of diversion the right to damages shall vest upon and not before the actual diversion of water.

The owner of any real estate, whether within or without the commonwealth, which is not taken but is injured by the taking of the waters of Ware river under authority of this act or by the construction of the works incident

8

thereto shall be entitled to damages therefor and may recover the same from the commonwealth as in the case of a taking in accordance with the provisions of this act.

SECTION 6. In carrying out the powers and duties conferred upon it by this act, the commission may construct and maintain buildings, machinery, roads, conduits and aqueducts; may lay and maintain pipes, drains and wires; may alter or change the grades or directions of any water course; may carry and conduct any aqueduct, conduit, pipe, drain or wire under or over any water course, or any railroad, street or other way, in such a manner as not unnecessarily to obstruct or impede travel thereon; may dig up any such road, street or way, and lay, maintain and repair aqueducts, conduits, pipes, wires and other works beneath the surface thereof, conforming to any reasonable regulations made by the mayor and aldermen of cities and the selectmen of towns, respectively, wherein such works are performed, and restoring, so far as practicable, any such road, street or way, to as good order and condition as the same was in when such digging was commenced; the commission may enter upon and use the lands of others; may take down dams to such an extent as it may deem necessary for prosecuting its works, and shall rebuild such dams whenever the necessity for keeping them down ceases; shall use such lands and do all work relating to such dams, in a reasonable manner with regard to the interests of the owners thereof, and, so far as practicable, shall heed all reasonable requests made by such owners; and in general may do any other act or thing necessary or proper for carrying out the powers and duties conferred upon it by this act.

The commission may raise or alter or discontinue parts of any railroad or public way, and, in case of a railroad, shall make such raisings or alterations of the railroad or construct upon existing or other locations parts of the railroad to take the place of the parts so discontinued,

9

as and in such manner as shall be mutually agreed upon by the commission and the board of directors of the railroad company, and, if they cannot agree thereon, then as and in such manner as shall be determined on the application of either party in writing by the department of public utilities, which is hereby authorized and directed to adjudicate finally upon the same; and, if the commission shall be of the opinion that the making of any such change of grade, alteration or construction requires that lands or rights therein be taken therefor, the commission shall, on behalf of the commonwealth, take such lands or rights therein and convey the same to the railroad company, to be thereafter held and used as the board of directors of such company may determine, and the railroad company may, if it desires, locate its lines over any lands or rights therein so conveyed to it, and, when said new lines of railroad are completed, the railroad company may discontinue the operation of the portions of its existing lines for which the new lines are substituted, and may maintain and operate said new lines of railroad; and the commission shall make the raisings or alterations of public ways as aforesaid and build in place of the parts of public ways discontinued as aforesaid such other reasonable and suitable ways, which shall thereafter be highways, as and in such manner as shall be mutually agreed upon by the commission and the county commissioners of the county in which the work is done, or, if they cannot agree thereon, then as and in such manner as shall be determined on the application of the commission in writing by the division of highways of the department of public works, which division is hereby authorized and directed to adjudicate finally upon the same.

The commission, in flooding or otherwise affecting any burial ground, shall conform to any reasonable requirements relating thereto of the board of health of the city or town in which the same is located.

10

The commission may make such surveys, borings and do such other preliminary work on private lands as the commission may determine to be necessary or desirable, doing as little damage as possible and paying for the same.

SECTION 7. The commission may sell at public or private sale, or exchange or lease any property, real or personal, or any easement or water right, whether taken by eminent domain or otherwise acquired, which in the opinion of the commission is no longer needed for the purposes of this act. Any sums of money so received shall be applied to reduce construction costs or to reduce the bonded indebtedness for the works. The commission may, by lease, license or contract, permit the construction and maintenance on or over any land or waters under its control of towers, poles, wires and other structures for the purpose of transmitting electric power. The commission may construct, maintain and operate such power plants and other structures as may in its opinion be necessary to utilize the fall of water created at any of the dams, channels, tunnels or other structures under its control, for the production of power or electricity; may locate, construct and maintain lines for transmitting the same; and may sell or contract for the sale or use of any power or electricity so created, and any sums of money so received shall be applied to reduce the charges of maintenance of said works.

SECTION 8. For the purpose of carrying out the provisions of this act, the commission may expend such amounts, not exceeding in the aggregate fifteen million dollars, including the sum required to be paid by the city of Worcester under section twelve, as may, from time to time, be approved by the governor and council. To meet such expenditures, the state treasurer shall, from time to time, on the request of the commission and subject to such approval, issue bonds of the commonwealth to an amount not exceeding the sum of

11

fourteen million dollars, which shall be designated on their face, Metropolitan Additional Water Loan, Act of 1926. Such bonds shall be issued as coupon or registered bonds, for such term of years as may be recommended by the governor, in accordance with section three of Article LXII of the amendments to the constitution, and shall bear interest at such rate as shall be fixed by the state treasurer, with the approval of the governor and council. The amounts necessary to meet interest and serial payment requirements on said bonds and the expenses of maintaining and operating the works to be constructed by the commission under this act, and such other expenses as may be authorized hereunder, shall be added to the annual assessments upon the cities and towns comprising the metropolitan water district and apportioned and collected as provided by section twenty-six of chapter ninety-two of the General Laws.

SECTION 9. The supreme judicial court or any justice thereof and the superior court or any justice thereof, during a sitting of the court or in vacation, on the petition of the commission or of any city, town, corporation or person interested, or of the attorney of any such petitioner, shall have jurisdiction in equity or otherwise to enforce the provisions of this act and of any rule, regulation or order made under the authority of the same and to prevent any violation of said provisions, rules, regulations or orders; provided, however, that no suit in which the right of the commission to make any taking authorized by this act is questioned shall be brought except in the supreme judicial court for the county in which said taking has been made or is to be made, nor unless the said suit is brought within six months after the passage of this act.

SECTION 10. No person shall after the effective date of this act erect a dam for mill purposes across the

12

Ware river or any of its tributaries above the point of diversion authorized by this act without the consent in writing of the commission, or, after said works have been turned over to the metropolitan district commission, of said metropolitan district commission. In granting its consent, either commission may impose such conditions as it may deem to be for the public interest. Any person owning a practicable mill site on said river or any of its tributaries who applies for such consent and is refused, or is granted consent subject to conditions, and who is damaged in his property by such refusal or by the imposition of such conditions, may recover from the commonwealth the damage so caused in the manner provided in section five.

SECTION 11. The towns of Hubbardston, Barre, Akham, Hardwick, New Braintree, Palmer and Ware, any of them, may take from the Ware river above the point of diversion established under section one so much of the water thereof as they, or any of them, have already taken, or may hereafter be, authorized by the legislature to take for supplying their inhabitants with water, and in case any of said towns shall hereafter on its application therefor be authorized to take such water it shall pay to the commonwealth, on behalf of the metropolitan district, a fair proportion of the cost incurred by the commonwealth for the acquisition under the provisions of this act of the waters of said river, or rights therein, and for the construction, maintenance and operation of such works and structures as are by this act provided for, including a fair proportion of the cost of maintaining the purity of said water, the said proportion to be determined by an engineer designated by the metropolitan district commission and by an engineer appointed by such applicant town, and, if they cannot agree, such proportion shall be determined by a master to be appointed by the supreme judicial

13

court on the petition of the commonwealth or said applicant town, and the report of the master when affirmed by said court shall be final and conclusive on all parties.

SECTION 12. The city of Worcester is hereby authorized, for the purpose of meeting the requirements of said city for increasing its water supply and such requirements of adjacent and nearby towns now supplied or hereafter required to be supplied by said city, from time to time, to acquire by purchase or otherwise, or take by eminent domain in accordance with the procedure set forth in section five, and subject to the provisions thereof, and to hold and convey, directly or indirectly, into and through said city the waters of South Wachusett brook, so-called, and the waters of Quinapoxet river, so-called, in the town of Holden, at or near an elevation of seven hundred and eight feet above mean sea level at Boston, at or above the outlet of Quinapoxet pond, including the waters in any ponds or reservoirs thereon and the waters flowing directly or indirectly, into and from the same, and all springs and tributaries thereto, and the water rights connected with the aforesaid waters and sources above the places of taking; and the said city may take existing reservoirs and ponds upon said streams and their tributaries above the points at which it is authorized as aforesaid to take the said waters, but the total supply herein authorized to be taken shall not exceed in any calendar year an average quantity of ten million gallons of water per diem, and the balance of the waters remaining, and also from time to time such part of the quantity of water herein authorized to be acquired and diverted as is not, in the opinion of the water commissioner of said city, needed for the supply of the water system of said city, shall be permitted to flow to the Wachusett reservoir of the metropolitan water

14

system; provided, that if in the opinion of the metropolitan district commission, the needs of the metropolitan water system, pending the completion of the works necessary to divert the flood waters of the Ware river as authorized in section one, require that said amount herein authorized to be taken by the said city be reduced, the metropolitan district commission may, at any time and from time to time, reduce said amount to not less than an average quantity of five million gallons of water per diem. In case of such reduction the commonwealth on behalf of the metropolitan district shall pay the city of Worcester for the amount of water so withheld by such reduction at the rate of forty dollars per million gallons. The said city shall take such measures to protect and preserve the purity of the said waters and shall maintain such sanitary conditions relative thereto and in their respective watersheds as the state department of public health may require. Said city may by aqueduct or pipe line conduct the waters so taken, into the city directly or through any reservoir and any aqueduct or pipe line belonging to said city and now existing. The said city may, for the purposes aforesaid, construct, lay and maintain conduits, pipes, canals, water courses, dams, reservoirs and other works under or over lands, water courses, railroads, railways, public or private ways and along such ways, and may take by purchase or otherwise and hold in fee or otherwise any lands, dams or structures, easements or rights in land that may be deemed necessary for said purposes and for collecting, purifying, storing, discharging, conducting or distributing said waters or preserving the purity thereof. The water taken by said city under this section shall be measured in a manner approved by the metropolitan district commission which shall have at all reasonable times

15

free access to any apparatus or device used for measuring the same and to the records thereof.

In addition to such payments and damages as said city may be required to make for any purchases or takings hereinbefore authorized, it shall pay into the state treasury on or before the first day of July, nineteen hundred and twenty-seven, the sum of one million dollars, and thereupon the metropolitan district commission, acting for the commonwealth, shall release and convey to said city all right and title to said waters, subject to the provisions of this act. The amount so paid into the state treasury shall be used toward defraying construction costs incurred by the commission under this act.

In consideration of the provisions of this section, it is within the contemplation of this act that no further claim be made by the city of Worcester to any further part of the watershed tributary to the Wachusett reservoir for water supply purposes.

SECTION 13. For the purpose of meeting expenditures required under the preceding section, the city of Worcester may borrow from time to time, within a period of eight years from the effective date of this act, such sums as may be necessary, not exceeding, in the aggregate, two million five hundred thousand dollars, and may issue bonds or notes therefor, which shall bear on their face the words, City of Worcester Water Loan, Act of 1926. Each authorized issue shall constitute a separate loan, and such loans shall be payable in not more than thirty years from their dates. Indebtedness incurred under this act shall be in excess of the statutory limit, but shall, except as herein provided, be subject to chapter forty-four of the General Laws.

SECTION 14. The said city shall, at the time of authorizing said loan or loans, provide for the payment

16

thereof in accordance with section thirteen; and when a vote to that effect has been passed, a sum which, with the income derived from water rates, will be sufficient to pay the annual expense of operating its water works and the interest as it accrues on the bonds or notes issued as aforesaid by the city and to make such payments on the principal as may be required under the provisions of said section thirteen shall, without further vote, be assessed by the assessors of the city annually thereafter in the same manner as other taxes, until the debt incurred by said loan or loans is extinguished.

Approved May 28, 1926.

Appendix B - Public Input Summaries

Summary

B-1: Summary of Public Input Received from the WRWAC

Between January 1998 and November 1999, the WRWAC met fifteen times to discuss public access issues on MDC/DWM lands. The topics discussed and ideas generated during these meetings are detailed in Table B-1a&b. In October 1999, the WRWAC submitted a list of ten specific recommendations regarding the Divisions' draft MDC/DWM Public Access Management Plan Update – Ware River Watershed (Table B-1c). Most of the recommendations were incorporated into the Final Plan.

B-2: Summary of Public Input Received from MDC/DWM Abutters in the Ware River Watershed

Following input received during a WRWAC meeting, the MDC/DWM distributed a questionnaire for abutters of MDC/DWM lands in the Ware River watershed regarding public access issues. 650 questionnaires were mailed. 230 completed questionnaires were returned. Table B-2 summarizes responses submitted to the Division. The MDC/DWM questionnaire is included. Many suggestions were incorporated into the Final Plan.

B-3: Summary of Public Input Received After the Workshop

On September 17, 1999, the Division held a public workshop in the town of Barre, Massachusetts, to identify current public access issues on Division lands in the Ware River Watershed as part of the development of the draft Plan. The Division estimated over three hundred people were in attendance. Between September 1998 and November 1999, the Division received x public input comments from the general public

B-4: Summary of Comments Received During the Public Hearing

On November 17, 1999, the Division held a public hearing to comment public comments on the draft MDC/DWM Public Access Management Plan Update – Ware River Watershed. This input is summarized in Table B-4.

B-5: Summary of Comments Received During the Public Comment Period

Between November 18 and December 1, 1999, the Division received letters, e-mails, phone calls, and verbal comments regarding the draft Plan.

B-6: 1988 MDC/DWM Designated Trails and 1999 Public Input Maps

In 1988, MDC/DWM published designated trail maps for snowmobile and horseback riding access on Division lands in the Ware River watershed (O'Conner, 1988). These maps have been recreated and included here. Between January 1998 and November 1999, the Division developed trail maps which reflect public input during this period. The final MDC/DWM Designated trail maps are found in the Access Plan.

A – 1988 MDC/DWM Designated Snowmobile Trails

B – 1998 Public Input – Desired Snowmobile Trails

C – 1988 MDC/DWM Designated Horseback Riding Roads and Trails

D – 1998 Public Input – Desired Horseback Riding Roads and Trails

B-1a: Summary of Public Input Received from the Ware River Watershed Advisory Committee (WRWAC)

Table B-1a presents a record of MDC/DWM's outreach activities with the WRWAC during the planning process for the *MDC/DWM Public Access Management Plan Update – Ware River Watershed* between January 1998 and December 1999. The table details the meeting date, meeting location, MDC/DWM staff present at the meeting, the public access subjects discussed, and lists materials distributed and requests for information.

Table B-1a: WRWAC Meetings				
Date	Location	MDC/DWM Staff Present	Public Access Subjects Discussed	Materials Distributed (d) /Requested (r)
Advisory Committee Meetings				
12/11/97	Barre, MA		Kick-off meeting	
1/22/98	Hubbardston	W. Pula M.Hopkinson	<ul style="list-style-type: none"> MDC/DWM's need for a Public Access Plan Update AC's role in the update Trail systems for horses, snowmobiles, and bicycles 	<ul style="list-style-type: none"> Master Policy Statement (draft) – d 1988 Ware River Access Plan (relevant portions) – r 1998 Quabbin Reservoir Watershed Access Plan – r Quabbin Land Management Plan – Beaver Management section - r
3/19/98	Hubbardston	W.Pula L. Gustavsen	<ul style="list-style-type: none"> Specific Public Access Issues 	<ul style="list-style-type: none"> WRWAC's List of Public Access Issues - d

Table B-1a: WRWAC Meetings

Date	Location	MDC/DWM Staff Present	Public Access Subjects Discussed	Materials Distributed (d) /Requested (r)
5/7/98	Hubbardston	W.Pula M. Hopkinson	<ul style="list-style-type: none"> • Snowmobile Trails • Horse Trails • Dog Training Trials • Boating Policy • Night Access 	<ul style="list-style-type: none"> • Horseback riding trail map - r
6/11/98	Hubbardston	W.Pula M. Hopkinson	<ul style="list-style-type: none"> • Horse trails • Bike trails • Night Access • Signage Plan • Master Policy Statement • Public Access Matrix 	<ul style="list-style-type: none"> • Develop a map with all designated trails to understand possible conflicts – r • Signage Plan - d
9/17/98	Hubbardston	W.Pula M. Hopkinson D. Clark	<ul style="list-style-type: none"> • Public Access Maps • Public Access Workshop 9/24/99 	<ul style="list-style-type: none"> • Snowmobile trails maps, horseback riding maps, bicycle maps, seasonal gate operation maps -d
11/12/98	Hubbardston	W.Pula L. Gustavsen M. Hopkinson	<ul style="list-style-type: none"> • Workshop • Membership • Snowmobile Bridge • Subcommitt ees (horse, snowmobile, other) 	

Table B-1a: WRWAC Meetings				
Date	Location	MDC/DWM Staff Present	Public Access Subjects Discussed	Materials Distributed (d) /Requested (r)
1/7/99	Hubbardston	W. Pula L. Gustavsen	<ul style="list-style-type: none"> • Membership • Open meeting Law • “Ware River Watershed Association” • Web site: www.state.ma.us/mdc/water.htm • Horseback riding trails • Snowmobile trails • Illegal trails 	<ul style="list-style-type: none"> • Mylar sheets with hydrologic features and proposed trails – d • MA Open Meeting regulations – d • EOEa and MDC/DWM Land Disposition Policies • Map of snowmobile trails requested by club – d • Letter to Sec. Durand regarding horse access
3/18/99	Hubbardston	M. Hopkinson	<ul style="list-style-type: none"> • Membership • Subcommittees • Snowmobile Trail Groomer • Horse Trails • Bike Trails 	<ul style="list-style-type: none"> • MDC/DWM Criteria for Designated Horse trails –d • MDC/DWM Criteria for designated Snowmobile trails - d
4/29/99	Hubbardston	W.Pula L. Gustavsen M. Hopkinson	<ul style="list-style-type: none"> • Membership • Open meeting law acknowledgment • Subcommittee Reports – Boating 	<ul style="list-style-type: none"> • “Ware River Horse Association Report” –d
5/20/99	Hubbardston	W.Pula M. Hopkinson	<ul style="list-style-type: none"> • Snowmobile trails • Snowmobile groomer • Bike trails 	<ul style="list-style-type: none"> • Set of snowmobile trails (1988, Public Input, Proposed) - d

Table B-1a: WRWAC Meetings				
Date	Location	MDC/DWM Staff Present	Public Access Subjects Discussed	Materials Distributed (d) /Requested (r)
	Hubbardston	W.Pula L. Gustavsen M. Hopkinson	<ul style="list-style-type: none"> Horse trails 	<ul style="list-style-type: none"> Map of proposed horse trails – d Report by Horse Subcommittee - r
9/16/99	CANCELLED DUE TO HURRICANE FLOYD			
10/14/99	Hubbardston	L. Gustavsen M. Hopkinson	<ul style="list-style-type: none"> Public Access Plan Update – status report Public Hearing MDC/DWM Land Abutter Questionnaire 	<ul style="list-style-type: none"> Public Access Summary (matrix) – d
10/21/99	Hubbardston	M. Hopkinson	<ul style="list-style-type: none"> WRWAC ideas and recommendations 	<ul style="list-style-type: none"> Summary of WRWAC meetings –d Summary of ideas, suggestions, and recommendations – d
11/4/99	Hubbardston	L. Gustavsen	<ul style="list-style-type: none"> WRWAC recommendations for the Public Hearing 	<ul style="list-style-type: none"> Revised summary of WRWAC recommendations – d
11/17/99	Barre	L. Gustavsen W.Pula	<ul style="list-style-type: none"> Public Hearing 	<ul style="list-style-type: none"> Revised summary of WRWAC recommendations and ideas with MDC/DWM policy summary

B-1b: Summary of Public Input Received from the Ware River Watershed Advisory Committee (WRWAC)

Table B-1b presents a record of the WRWAC's ideas and suggestions regarding the *MDC/DWM Public Access Management Plan Update – Ware River Watershed* between January 1998 and December 1999.

Table B-1b: Summary of WRWAC's Suggestions to the MDC/DWM regarding Public Access Issues in the Ware River Watershed (1/98-11/99)	
Topic	WRWAC Suggestions
MASTER POLICY STATEMENT	
	➤ Unanimously endorsed by the WRWAC 6/11/98 (To be used for future discussions by AC)
MDC/DWM PUBLIC ACCESS POLICY SUMMARY(a.k.a. the matrix)	
	➤ Unanimous endorsement of format of the matrix.
GENERAL PUBLIC ACCESS ISSUES	
Signage	
	➤ Add road names to all maps.
	➤ Install road name signs on MDC/DWM roads.
	➤ Install signs stating what activities are allowed, restricted, and prohibited; when gate is open and closed.
	➤ Install info signs strategically (method, location)
Policy Information	
	➤ Create a brochure using matrix information
	➤ Distribute info through the town clerks, to emergency personnel, and information "kiosks" (e.g., ACOE at Barre Falls)
Motorized vehicle restrictions	
	➤ Continue vehicle restrictions (e.g., around Prison camp has created one of the best bird watching areas in Central MA)
Snowmobiling	
	➤ Conflicts between snowmobiles and cross-country skiers noted. More information requested regarding user conflicts.
	➤ AC voted to endorse the construction of the snowmobile bridge (6/11/98).
	➤ Concerns raised regarding increased usage by snowmobiles, safety crossing the river,
	➤ Develop a map with all designated trails

Table B-1b: Summary of WRWAC's Suggestions to the MDC/DWM regarding Public Access Issues in the Ware River Watershed (1/98-11/99)	
Topic	WRWAC Suggestions
	Enforcement
	➤ Increase enforcement prohibiting ATV's to reduce damage caused by vehicles
	Boats
	➤ Clarify what boats are allowed where (e.g., canoes) with better signs.
	➤ Clarify what motor size is allowed where with better signs.
	Bicycling
	➤ Connect existing bicycle routes with existing or planned bicycle trails
	➤ Develop a map with all designated trails
	Horseback Riding
	➤ Discussion both in favor and against horseback riding.
	➤ Develop a map with all designated trails
	➤ Prevent erosion
	➤ Request horseback riders, hikers, etc., wear brightly colored hats or clothing to warn hunters
	➤ Better identify designated horseback riding trails
	Maps
	➤ Develop one map, for planning purposes, showing all designated trails on MDC/DWM lands in the Ware River Watershed
	Night Access
	➤ Support for allowing vehicle access, but controlling other activities.
GENERAL PUBLIC ACCESS ISSUES	
	Horseback Riding Trails
	➤ Subcommittee prepared a Findings Report which identified four issues: 1) protection of water quality; 2) designated trails for horseback riding – including need for better signs; 3) user conflict – between riders and hunter and 4) diminishing open space due to land development for horse back riding

B-1c: Summary of Public Input Received from the Ware River Watershed Advisory Committee (WRWAC)

Table B-1c presents a record of the WRWAC's ten recommendations regarding the *MDC/DWM Public Access Management Plan Update – Ware River Watershed* between January 1998 and November 1999.

Table B-1c: WRWAC's Ten Recommendations Regarding the MDC/DWM Public Access Management Plan Update – Ware River Watershed	
WRWAC Recommendation	Vote Taken
➤ Extend the Long Pond unlimited-horsepower boating season to the period between May 15 and Columbus Day weekend.	4/29/99
➤ Accept the MDC proposed trail map, but with the addition of Brigham Road, Tracy Lane, Ruben Walker Road, Old Wood Road, Lackey Lane from the Army Corps road to the bridge abutment at the Burnshirt River, and the trail from Williamsville Road to Route 62.	6/17/99
➤ Accept the snowmobile trails as shown on the MDC proposed trail plan plus the addition of Parker Brook Trail, from Route 122 gate north and west to the power lines; Rail bed from Rutland State Park to Charnock Hill Road; Remove one dead-end trail south off Old Turnpike Road, and add another, which enters private land, then crosses New Braintree Road; and A short paved section from the Rutland State Park entrance south to Route 122A.	6/17/99
➤ Modify the draft matrix note no. 4 to allow the inclusion of designated bicycle trails.	10/21/99
➤ Delete "off-road and trail bicycling prohibited" from matrix note no. 4, as being redundant.	10/21/99
➤ Support and foster the development of railroad right-of-ways as trails for bicycles. (10/21/99)	10/21/99
➤ Modify matrix note no. 12 to read " <i>Organized</i> groups exceeding more than 25 individuals are required to obtain an MDC/DWM permit. Groups <i>up to</i> 25 individuals are asked to notify the MDC..." (Modifications are in <i>italics</i> .)	10/21/99
➤ Modify the matrix by (a) including ice fishing and shore fishing on the same line; (b) applying matrix note no. 6 to both activities; and (c) putting ice skating on a separate line by itself.	10/21/99
➤ Modify the Long Pond boating policy by (a) supplying the Rutland Police with five transferable unlimited-horsepower permits for use by the general public; and (b) extending the hours of operation of such boats to 10 AM through ½ hour after sunset.	10/21/99
➤ Provide adequate trail markings and post access regulations.	10/21/99

B-1c: Summary of Public Input Received from the Ware River Watershed Advisory Committee (WRWAC)

Table B-1c presents a record of the WRWAC's ten recommendations regarding the *MDC/DWM Public Access Management Plan Update – Ware River Watershed* between January 1998 and November 1999.

Table B-1c: WRWAC's Ten Recommendations Regarding the MDC/DWM Public Access Management Plan Update – Ware River Watershed	
WRWAC Recommendation	Vote Taken
➤ Extend the Long Pond unlimited-horsepower boating season to the period between May 15 and Columbus Day weekend.	4/29/99
➤ Accept the MDC proposed trail map, but with the addition of Brigham Road, Tracy Lane, Ruben Walker Road, Old Wood Road, Lackey Lane from the Army Corps road to the bridge abutment at the Burnshirt River, and the trail from Williamsville Road to Route 62.	6/17/99
➤ Accept the snowmobile trails as shown on the MDC proposed trail plan plus the addition of Parker Brook Trail, from Route 122 gate north and west to the power lines; Rail bed from Rutland State Park to Charnock Hill Road; Remove one dead-end trail south off Old Turnpike Road, and add another, which enters private land, then crosses New Braintree Road; and A short paved section from the Rutland State Park entrance south to Route 122A.	6/17/99
➤ Modify the draft matrix note no. 4 to allow the inclusion of designated bicycle trails.	10/21/99
➤ Delete "off-road and trail bicycling prohibited" from matrix note no. 4, as being redundant.	10/21/99
➤ Support and foster the development of railroad right-of-ways as trails for bicycles. (10/21/99)	10/21/99
➤ Modify matrix note no. 12 to read " <i>Organized</i> groups exceeding more than 25 individuals are required to obtain an MDC/DWM permit. Groups <i>up to</i> 25 individuals are asked to notify the MDC..." (Modifications are in <i>italics</i> .)	10/21/99
➤ Modify the matrix by (a) including ice fishing and shore fishing on the same line; (b) applying matrix note no. 6 to both activities; and (c) putting ice skating on a separate line by itself.	10/21/99
➤ Modify the Long Pond boating policy by (a) supplying the Rutland Police with five transferable unlimited-horsepower permits for use by the general public; and (b) extending the hours of operation of such boats to 10 AM through ½ hour after sunset.	10/21/99
➤ Provide adequate trail markings and post access regulations.	10/21/99

B-2: Summary of Public Input Received from MDC/DWM Abutters in the Ware River Watershed

The following Table summarizes 230 responses received from MDC/DWM's questionnaire sent out in September 1999 to 650 abutters (private landowners only) in the Ware River watershed. Of the 650 questionnaires sent out. Where possible, the responses submitted are characterized below.

1. Age (years)

- Age Range = 28-94 years

2. Female or male?

- Female = 62
- Male = 157
- Gender not given = 10

3. What town do you live in?

- Hubbardston = 109 Rutland = 48
- Barre = 17 Holden = 4
- Oakham = 10 Princeton = 5
- Other = 37

4. How long have you lived in this town? (years)

- Average =
- Range =

5. Before receiving this letter, were you aware that the MDC/DWM lands are used as a public drinking water supply source?

- Aware = 228
- Unaware = 1

6. Before receiving this letter, were you aware that the MDC/DWM is updating its Public Access Plan?

- Aware = 84
- Unaware = 135

7. Before receiving this letter, were you aware that the MDC/DWM restricts and monitors public access on its drinking water supply lands?

- Aware = 204
 - Unaware = 25
-

8. What, if any, is the biggest problem you experience being an abutter to MDC/DWM lands?

- “None” = 65
- No comment given = 58
- Comment given = 126

9. What do you most value as an abutter to MDC/DWM water supply lands? (Check one ✓)

- Privacy = 147
- Wildlife = 79
- View = 36
- Access to trails = 41
- Other = 17

10. Have you observed encroachment activities coming from private lands (i.e., mowing or cutting vegetation, storing materials, building trails, etc.)? onto water supply lands? (Circle yes/no)

Yes = 44 No = 189

11. Do you participate in any of these activities on MDC/DWM lands near your land? (Check all that apply:

- Driving/Sight Seeing = 82
- Snowmobiling = 8
- Operating All-Terrain Vehicles = 10
- Bicycling = 56
- Bird Watching/Nature Study = 98
- Hiking/Walking/Snow-Shoeing = 155
- Cross-Country Skiing = 58
- Hunting/Trapping = 55
- Ice Fishing/Ice Skating = 51
- Shore Fishing = 67
- Dog Walking = 70
- Horseback Riding = 17
- Boating (motorized) = 23
- Canoeing/Boating (nonmotorized) = 57
- Swimming/Wading = 48
- Operating Personal Watercraft (e.g., jet skis) = 1
- Camping = 12
- Trail Marking = 5
- Trail Clearing = 6
- Collecting = 16

12. We are interested in identifying user conflicts. Please identify those activities which conflict with your primary activity by checking the appropriate box. Example: If your primary activity is hiking on MDC/DWM lands and you find that biking on the same trail conflicts with your experience, then place a check mark on the row labeled hiking and column labeled biking (✓).

Please include other comments regarding user conflicts:

Primary Activity	Driving	Snowmobiling	ATVs	Bicycling	Bird watching	Hiking, etc	Skiing	Hunting	Ice fishing	Shore fishing	Dog walking	Horseback riding	Boating	Canoeing	Swimming	Jet skis	Camping	Trail marking	Trail clearing	Collecting
Driving/Sight seeing	X	4	3	1				2								1				
Snowmobiling		X	1		1	2	2	2								1				
Operating ATVs			X	1				1								1				
Bicycling	3	4	8	X				5								1				
Bird watching	2	13	12		X			9					1			4		1	2	
Hiking/walking/sno	8	24	28		X			19				2	1			3				1
Cross-country skiin	3	16	8	1		X		3				1	1			2				1
Hunting/Trapping	1	8	6	1	1		X									2				
Ice fishing/Ice skati	1	4	2					2	X							1				
Shore fishing	1	1	2					2		X			1			5				
Dog walking	4	8	6	2				8			X					1				
Horseback riding	2	3	6					5				X				2				
Boating (motorized)		1	1					1					X			4				
Canoeing/Boating	1	2	2					1		1	1	2	X			6				1
Swimming/Wading		1	1					1				5		X		9				
Jet skis		1	1					1							X					
Camping	1	4	5					1								2	X			
Trail marking		1	1					2								1		X		
Trail clearing		1	1					2								1			X	
Collecting		1	1					1								1				X

13. Given the restrictions on drinking water supply land, what could MDC/DWM staff to improve the following three items to improve public access management?

- Suggestions to not included in this summary.

14. The following statements are all true. Please check the statements you are aware of:

All-terrain vehicles (ATVs) are prohibited on all MDC/DWM lands.

- Aware = 126

Snowmobile use is restricted to specific trails on MDC/DWM lands

- Aware = 129

Horse use is restricted to specific trails on MDC/DWM lands.

- Aware = 98

The MDC/DWM and MWRA are funded entirely through water fees collected by the MWRA from the water users.

- Aware = 50

The Ware River Watershed Advisory Committee (WRWAC) was formed in 1998 by legislation to represent the public on issues concerning the MDC/DWM drinking water supply lands in the Ware River watershed.

- Aware = 54

B-3: Summary of Public Input Received After the Workshop

Table B-3 presents a summary record of verbal public testimony given by the general public on 11/17/99 during a public hearing held from 7 – 9pm at the Quabbin Regional High School, Barre, Massachusetts regarding the draft *MDC/DWM Public Access Management Plan Update – Ware River Watershed*. Please see Table E-1b for recommendations submitted by the WRWAC to the MDC/DWM in advance of the public hearing.

Table B-3: Summarized Public Testimony at the Public Hearing 11/17/99		
Topic	Public Input	Town or Affiliation
GENERAL		
	<ul style="list-style-type: none"> ➤ Ban any activity on MDC lands, which has a negative impact on water quality (e.g., motorized vehicles and horses). ➤ Human interference can only pollute. If the land is there for water quality protection, it is doing its job being there. People are missing that point. If you enjoy large tracts of land, go buy some. 	Hubbardston
	<ul style="list-style-type: none"> ➤ The Division should not be pressured to change uses. Do not go any easier; this plan is on the edge of over use. 	WSCAC
	<ul style="list-style-type: none"> ➤ You and I are not the real polluters. The real polluters are 1) the loss of the dams on all the rivers after the 1938 hurricane; 2) airplanes dumping fuel to increase efficiency; 3) runoff from highways. 	Hubbardston
	<ul style="list-style-type: none"> ➤ If this is a water protection situation, and then do that job, don't compromise. ➤ There is not boat, horse, atv, snowmobile, that does not pollute. ➤ Do not compromise, because you'll ultimately compromise the water supply. 	Hubbardston
	<ul style="list-style-type: none"> ➤ Tell each user group where they are allowed to go. Require these groups to "police" their own areas. 	Barre
	<ul style="list-style-type: none"> ➤ Dumps, papermills, and beavers are the real problem, not horses, if they stay on the roads. 	Barre
	<ul style="list-style-type: none"> ➤ Vote, write letters, join Massachusetts Association of Stable Owners, Operators, and Instructors (MASOOI), get lobbies make MDC listen. 	MASOOI
	<ul style="list-style-type: none"> ➤ Metropolitan District Commission/DWM could organize a permit system for land usage, which would fund bridges and culverts. 	Fitchburg

Table B-3: Summarized Public Testimony at the Public Hearing 11/17/99

Topic	Public Input	Town or Affiliation
	➤ Why can't we all get along? I want to use the land with my son. No more fees.	Oakham
	➤ I am in favor of the presumption of openness for all state land as long as it doesn't hurt the water quality.	Barre
MOTORBOATING ON LONG POND		
	➤ Post and enforce the existing rules at Long Pond - legal 45 mph speed limit; removal of weeds from boats; "no swimming and no picnicking"; no swimming and picnicking. Do not extend the season for motorboats.	Worcester
	➤ MDC/DWM should accept the WRWAC recommendations regarding motor boat access on Long Pond. Metropolitan District Commission should first patrol the Long Pond area and issue citations before changing its policies based on one person's testimony.	Oakham
	➤ Improve the permit system. Use applications and conduct a random selection like the deer hunt.	Barre
	➤ Also, double the number of available permits by having permits for even days and permits for odd	Oakham
	➤ I believe MDC/DWM has jurisdiction over Long Pond.	
	➤ I have never seen anyone patrol this area.	
	➤ I pick up trash, which I think is coming from the motorboats.	NA
	➤ There must not be a pollution problem; otherwise the people in Boston would be stopping us.	
HORSEBACK RIDING		
	➤ Discuss water quality. Show the public that horse access is a water quality issue.	Hubbardston
	➤ Groups of 50 or more should be limited to major trails; small groups or individuals horse riders should be allowed the same presumption of openness	WRWHA
	➤ No specific recommendation was made; studies were cited saying that horses are not a problem.	Hubbardston
	➤ Horse access should be allowed everywhere because there is no current measurable impact on water	BSTR
	➤ Make more woods trails available as designated horse trails because the dirt roads are open to motorized vehicles creating a safety concern.	BRDC
	➤ These roads are rocky and hurt the horse's feet. The club is concerned with the future of the Cross State Trail ride.	MAOSSI
	➤ Let's work together. MDC should work with MAOSSI to	

Table B-3: Summarized Public Testimony at the Public Hearing 11/17/99		
Topic	Public Input	Town or Affiliation
	open up more trails (like the Army Corps) and enlist trail riders to police and self-police in areas	
	➤ Horseback riders should have the same access to all state lands like hunters do. I'd like the state to compromise.	Hubbardston
<u>SNOWMOBILES</u>		
	➤ Require ATVs and snowmobiles to buy a sticker to have access to Division land, then users would have more say on how we want to use the land.	Barre
<u>HUNTING</u>		
	➤ Hunting occurs less than two months a year. No specific recommendation made. See comments made to clarify previous statements	Barre
	➤ Beavers are really the water quality problem. Taxpayers bought this land; taxpayers have the right to their land.	Oakham
<u>OTHER</u>		
Wading	➤ MDC/DWM signs should be posted at Comet Pond "wading with waders is not allowed"	NA

B-4: Summary of Comments Received During the Public Hearing

Table B-4 presents a summary record of twenty-four written public comments received by the Division during the public comment period (11/1/99-12/1/99) for the draft *MDC/DWM Public Access Management Plan Update – Ware River Watershed*. Please see Table B-1 for WRWAC recommendations submitted to the MDC/DWM.

Table B-4: Summarized Written Public Input 11/1/99-12/1/99		
Topic	Public Input	Town or Affiliation
GENERAL		
	<ul style="list-style-type: none"> ➤ Some forms of public access, especially pedestrian access, are generally acceptable, if the numbers can be kept down; motor vehicles and horses are another matter. ➤ Horse waste may be a source of significant pollution if deposited near or in tributary waters. ➤ We would not want to see any weakening of the current balance, which seems to us to tend towards, over-use rather than under-use. ➤ This general endorsement does not extend to the issue of increasing the use of unlimited horse-power boats on Long Pond; 	WSAC
	<ul style="list-style-type: none"> ➤ The Department of Environmental Protection supports MDC's approach to balancing the protection of a component of the state's largest drinking water source with allowing recreational opportunities in the watershed to the extent that they can be monitored and controlled. 	MA/DWM
	<ul style="list-style-type: none"> ➤ Provide porta potties between spring through hunting season at the canoe ramp and fishing area along Ware River at Route 122 to reinforce the message that this water is just about to go into the aqueduct; ➤ Designate "Low Salt Area" in the area between Ware River crossing of Route 122 to below Shaft 8; ➤ Reroute storm drainage from Route 122, extending from Coldbrook Road area west to Shaft 8, to discharge below the Shaft 8 intake; ➤ Eliminate erosion down lumber road which crosses the Mass Central RR southeast of Shaft 8 and east of the RR embankment washout, by ditching drainage to the side onto vegetated areas; ➤ Eliminate erosion down access road south of Shaft 8 up to springhouse on the Mass Central RR row, by re-establishing the original RR drainage ditch on the south side of the row, which would take the water west to a 	Barre

Table B-4: Summarized Written Public Input 11/1/99-12/1/99		
Topic	Public Input	Town or Affiliation
	<p>culvert under the row, delivering it onto vegetated area;</p> <ul style="list-style-type: none"> ➤ Eliminate the Barre landfill's discharge of water onto MDC land north of the Mass Central RR row. I think MDC would be vigilant against encroachments by abutters in general. ➤ Complete the repairs of damage caused by the Muddy Pond beaver dam blowout; on the Mass Central RR row; two sections of embankment washed out next to stone culverts, and one culvert with one of 2, 8'x8' capstones fallen into the waterway; ➤ Research the "Whitehall" sign at the end of the dirt road across from Rt 122 from the end of Rt 148 in Oakham. ➤ Eliminate the decapitation hazard posed by the cable blocking the entrance to an old sandpit on the north side of Rt 122 east of the end of Rt 148 in Oakham by installing a gate, barway, or several boulders, or hanging reflectors on the cable; ➤ Block vehicle access from Rt 62 in Barre, at the east end of the green bridge, south side of Rt 62, to an old road - several boulders would do it; ➤ Redeck, patch, or remove the deck of the steel bridge crossing the Burnshirt River north of Route 62 to eliminate the liability caused by holes in that deck; ➤ Print out new GIS maps at larger scale on larger sheets to make them intelligible - reduce geography represented to south of Rt. 62 to west of Rt. 56 ➤ On GIS maps, use a symbol for gates which could give the direction of the blockage (e.g., line with balls) ➤ Have rangers on duty Halloween eve and weekends to greet the traditional "Halloween ATV ride". 	
<u>OTHER</u>		
Passive Recreation	<ul style="list-style-type: none"> ➤ I am writing to strongly disagree with this proposal (opening more miles of trails to horseback riding and skimobiles in the Ware River Watershed), as I have seen first-hand what these people do once they have gained access (example given). I would ask you to at least consider a type of permit system is you do allow more access, you could limit the time of year for horseback riding (whenever foresters 	Hubbardston

Table B-4: Summarized Written Public Input 11/1/99-12/1/99

Topic	Public Input	Town or Affiliation
	<p>determine midseason is over), the number of riders each permit would be good for (anyone could throw up a stable and have trail rides of 20 to 30 horses, advertise in the paper that they have miles of trails available, make a good profit at the MDC expense.</p> <ul style="list-style-type: none"> ➤ The same should be done with skimobiles. Their use should not be allowed on trails until a certain minimum depth of snow is reached and ground is frozen. I've seen guys out there tearing up the soil ➤ I think the MDCC should advocate for passive recreational use of the land such as hiking and cross-country skiing. 	
Wilderness	<ul style="list-style-type: none"> ➤ I would like to see larger portions of the MDC lands retain its "wilderness" attributes. ➤ I feel additional motorized access to Division lands should be prohibited - existing roads and snowmobile trails are adequate. ➤ I would ask the MDC to consider prohibit further motorized access of the waterways of the Ware River watershed and consider eliminating existing areas of motorized water access where that elimination makes sense ➤ I would ask the MDC to consider lowering the 20mph speed limit to 15 mph and to strictly enforce that limit. 	Palmer
Private property	<ul style="list-style-type: none"> ➤ Horse trails, snowmobile trails, and trails for hunters on MDC land would be a severe detriment to adjacent private property. 	Templeton
WRWAC recommendations	<ul style="list-style-type: none"> ➤ The Summary of 10 recommendation by the Ware River Watershed Advisory Committee should not be adopted as usual the state cannot seem to recognize that the state and its residents do extend west of Route 128 and the voices from the 	Ashburnham

Table B-4: Summarized Written Public Input 11/1/99-12/1/99		
Topic	Public Input	Town or Affiliation
	west fall on deaf ears	
Access Summary	➤ Format edits submitted	Barre
Signage	➤ Put signs with specific regulations in the high user areas (e.g., State Park in Rutland) include statement: "Because you are within 100 feet of the water, you are required to pick up and dispose of any fecal waste properly."	Rutland
INTERAGENCY		
	<ul style="list-style-type: none"> ➤ Include Crossover Road as one of the roads to be closed during mud season. ➤ We prohibit cleaning of trailers, vehicles, horses, and snowmobiles in Corps parking lots. ➤ Limited parking is allowed in lots only. ➤ Snowmobiles are not allowed on Dikes, 1,2, and 3 structures or in the vicinity. ➤ Limited snowmobile access is restricted to the overlook parking lot, Tracy Road, which connects to Brigham Road, and Crossover Road, which connects Pine Plains Road to Coldbrook Road. ➤ Add the ACOE to the list of acronyms on page 7; ➤ Reference ACOE's policy to coordinate recreational, public safety and public health policies with the Commonwealth. 	Hubbardston
HORSEBACK RIDING		
	<ul style="list-style-type: none"> ➤ Charts on page 21 & 46 are missing the numbers 12-15; ➤ Change policy from designated trails to all trails unless posted closed. ➤ Make a pilot program with horse community to work on culvert and bridge replacement projects and enhance education for the horse community regarding Metropolitan District Commission concerns. ➤ Clarify the definition of surface water on page 67. ➤ Add, scatter or spread out to remove or bury (it dries quite fast) ➤ Change the recommendation #6 from the WRWAC to read "support and foster the development of road right- 	BSTRA

Table B-4: Summarized Written Public Input 11/1/99-12/1/99		
Topic	Public Input	Town or Affiliation
	<p>of-ways as trails for multi, non-motorized use";</p> <ul style="list-style-type: none"> ➤ Clarify facts regarding horse populations, trends in horseback riding popularity, and research findings regarding cryptosporidium in horses. 	
	<ul style="list-style-type: none"> ➤ Restrictions placed on equine use appear to be without significant substantiation. ➤ I fully support Senate Bill 979 allowing equestrian use of MDC controlled land. 	BRDC
	<ul style="list-style-type: none"> ➤ Restriction placed upon equine use should be consistent with those placed upon pedestrian use. ➤ I fully support Senate Bill 979 allowing equestrian use of MDC 	BRDC
	<ul style="list-style-type: none"> ➤ I strongly support Bill #979 ➤ I strongly disagree with the proposed limit on groups of people on horseback riding in the MDC property in Barre and Oakham. Your policy does not account for the thousands of unregulated wild animals carrying the same diseases that you insist horses harbor despite any substantiated evidence. 	BRDC
	<ul style="list-style-type: none"> ➤ I strongly support Bill #979; ➤ I strongly disagree with the proposal to limit the amount of horses a riding club may have with their functions. Horses are checked and immunized. Riding clubs do their best to ensure that they leave no litter behind after an event... ➤ I am in hopes that you will reconsider this proposal and accept the bill. 	BRDC
	<ul style="list-style-type: none"> ➤ I disagree very strongly with your proposed policy of only allowing riding clubs to have functions of less than 50 horse. We have less impact; we do our best not to litter. Manure is biodegradable. Our animals are inspected yearly for contagious diseases and vaccinated for them. Your policy doesn't account for the thousands of unregulated wild animals carrying the same diseases that you insist horses harbor despite any substantial evident. ➤ I also support bill #979. 	BRDC
	<ul style="list-style-type: none"> ➤ I wish to inform you that I disagree with your proposal to a 50 horse limit on trail rides in the Barre, Oakham are of MDC properties. ➤ I further disagree with your proposal to have all manure removed from trails - it is almost impossibility and horse manure is biodegradable. 	BRDC

Table B-4: Summarized Written Public Input 11/1/99-12/1/99		
Topic	Public Input	Town or Affiliation
	➤ I support bill #979	
	➤ I support your goals of keeping water pure for future generations, but do not believe that restricting horse access does anything to achieve that goal. When I read a draft copy of the plan I was alarmed that the Metropolitan District Commission would put into print information that was absolutely untrue. I am also surprised that the MDC would allow such obvious discrimination against one user group. ➤ I hope your will reconsider the request to allow horseback riders the same “presumption of openness” that is enjoyed by hunters.	WRWHA
	➤ The limit of fifty horses per permit will end all organized rides (at least 60 and for special events at least 100).	BRDC
MOTORBOATING IN LONG POND		
	➤ The Long Pond boat application process should change. Take applications and have a random drawing. ➤ Double the amount of permits given out by using an odd/even date system. ➤ Extend the hours from 10:00 am to 8:00pm to allow people who work during the day some time in the evening. ➤ Limit the size of motors to 150 horsepower and the length of the boat to 16 feet. ➤ Extend the date from third Monday in May to the third Monday in September. ➤ Allow the above boats on the Quabbin Reservoir.	South Barre
SNOWMOBILES AND ALL-TERRAIN VEHICLES (ATVS)		
	➤ If parking were allowed on Rutland State Park (Ware Road), we would like to use the logging road at the entrance at the parking instead of riding on a plowed road. We can then connect it to the abandoned railroad bed.	NA
	➤ Allow ATVs on the same trails as snowmachines. ➤ Create a permit/sticker (e.g.,\$50) for ATVs and snowmachines to limit the number on the land and bring in income.	Barre

B-5 – 1988 MDC/DWM Designated Public Access Maps and 1999 Public Input Maps, Ware River Watershed

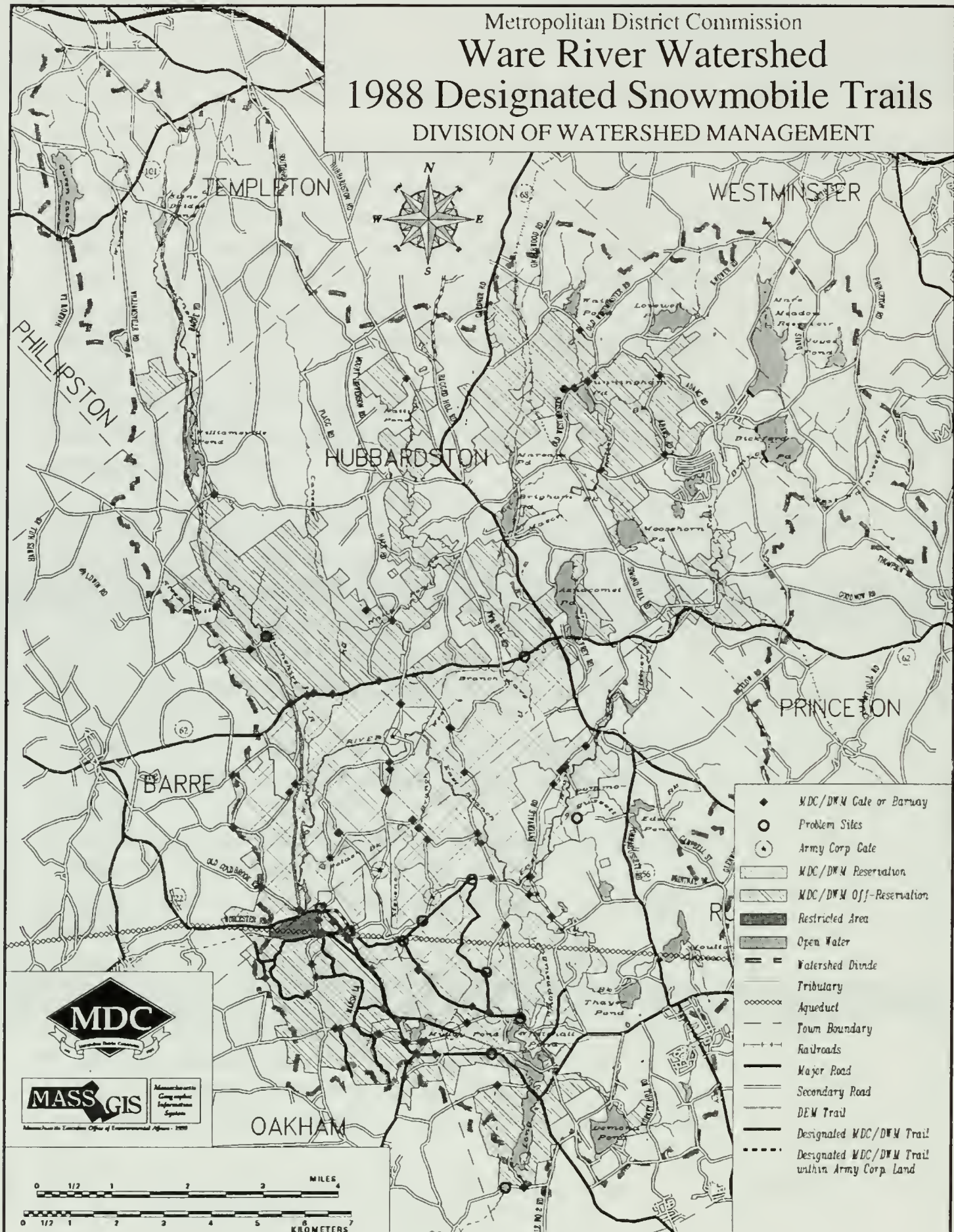


Figure 1 - 1988 MDC/DWM Designated Snowmobile Trails – Ware River Watershed

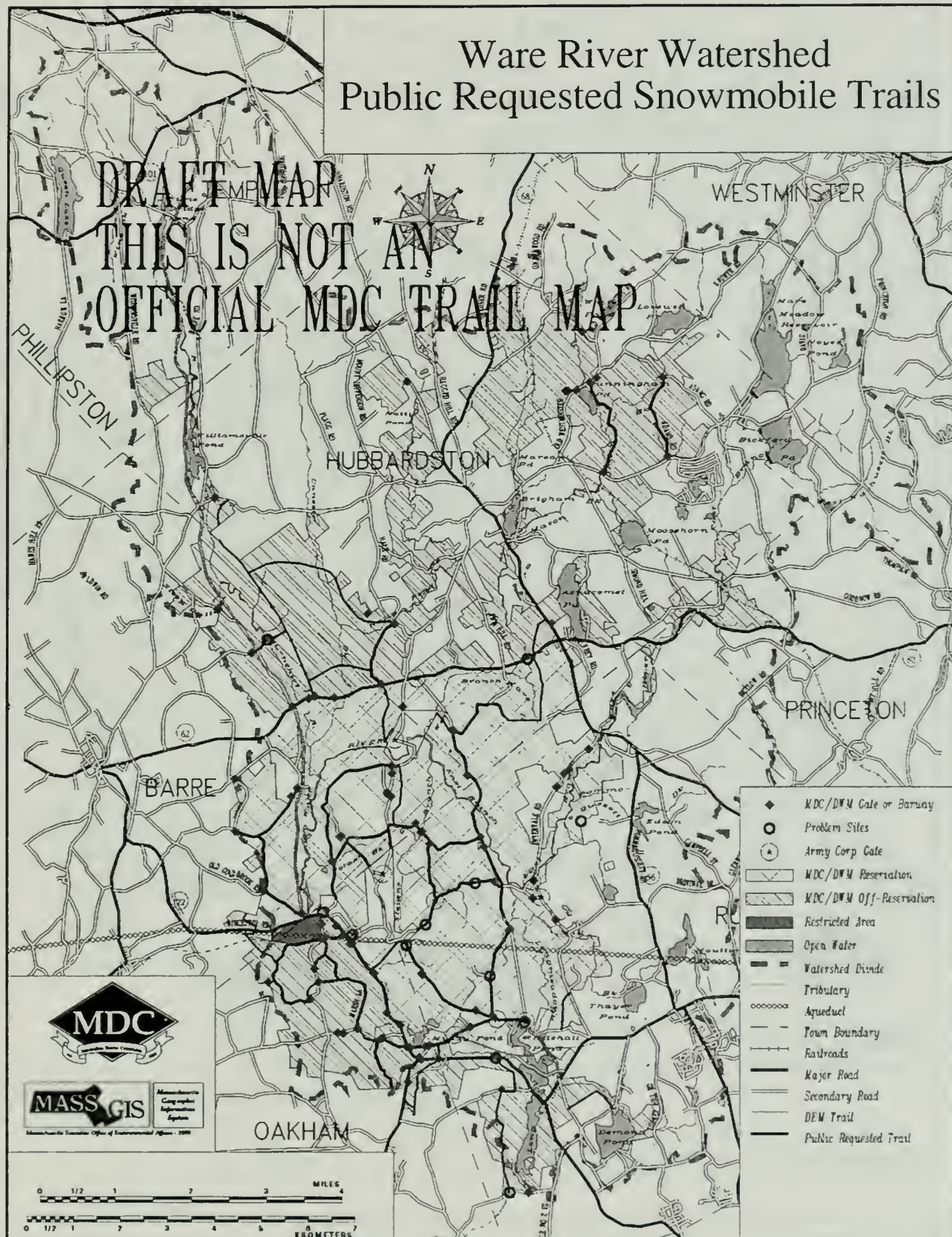


Figure 2 - 1999 Public Input - Snowmobile Trails, Ware River Watershed

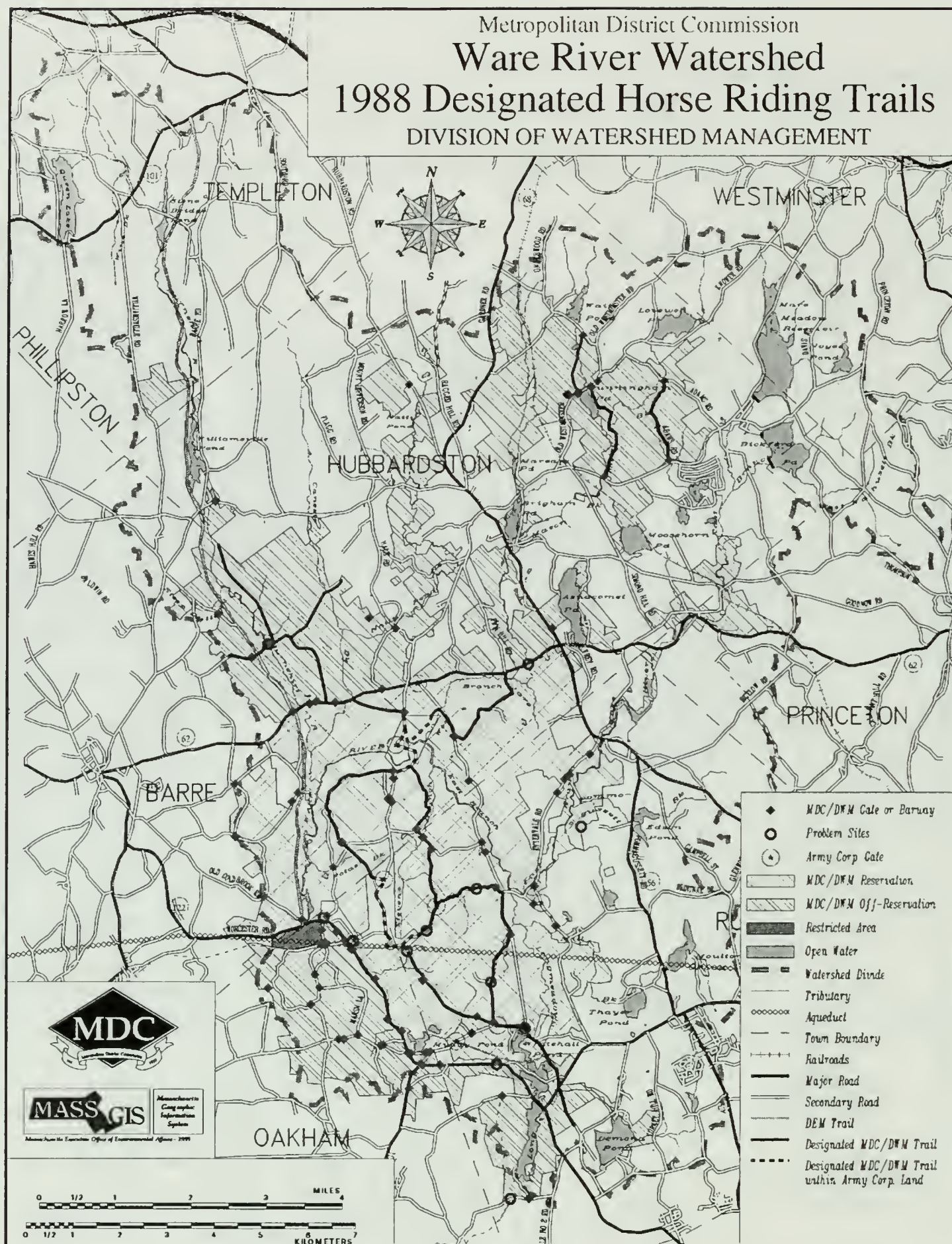


Figure 3 - 1988 MDC/DWM Designated Horseback Riding Trails - Ware River Watershed



Figure 4 – 1999 Public Input – Horseback Riding Trails – Ware River Watershed

Appendix C – MDC/DWM Public Access Permit Application

MDC/DWM Public Access Permit Application Ware River Watershed

METROPOLITAN DISTRICT COMMISSION (MDC)

DIVISION OF WATERSHED MANAGEMENT (DWM)

WARE RIVER FIELD OFFICE

578 Old Turnpike Road; Oakham, MA 01068

Telephone (508) 882-3636 - FAX (508) 882-9506

Access permits are required for groups of more than 25 individuals or 15 horseback riders anywhere on MDC/DWM lands in the Ware River Watershed System (see map). MDC/DWM grants permits to incorporated, non-profit organizations and certain other groups or individuals conveying appropriate need for such.

All MDC/DWM access permits may be suspended due to seasonal conditions such as mud or forest fire season, etc. Access to critical wildlife areas will be limited during certain time periods. Group size may be limited by the Superintendent.

Requests for group access should be made in writing and should be received by the Oakham Office at least three weeks prior to the proposed access date. Please return this form to the address above.

Please complete all information legibly:

APPLICANT _____

STREET _____

CITY _____ STATE _____ ZIP _____

PHONE _____

E-MAIL _____

Specify area of access; Gate # or road intersection (see map on back)

Continued on Next Page

Specify itinerary (trip route) :

Date of access (include alternate date): _____

Time of arrival & departure

How many in group? _____

Number & type of vehicles _____

Purpose of trip: _____

I agree to comply with all MDC/DWM Rules and Regulations and policies (attached).
I acknowledge my permit and privileges for use of the Ware River Watershed may be
revoked for Rules and Regulations violations.

Signed _____

Date:

Appendix D – Local News Articles

Watershed access will be expanded <MDC> to increase Ware River trail miles

By Bradford L. Miner
TELEGRAM & GAZETTE STAFF

Friday, 11/26/1999
Edition: RT. 9 WEST, Section: LOCAL NEWS, Page B1
Dateline: BARRE

BARRE - The Metropolitan District Commission will open additional acres of the Ware River watershed to public use next year, markedly increasing opportunities for people riding horses and snowmobiles.

Accommodating requests from two of the larger organized user groups, the <MDC> will increase the length of horse trails from 22 1/2 to 38 1/2 miles and snowmobile trails from 16 1/2 to 30 miles, according to William E. Pula, superintendent of Quabbin Reservoir.

These changes will be incorporated into access policies and regulations that will take effect Jan. 1.

Pula has oversight of the 23,000-acre Ware River watershed, which spans the communities of Barre, Oakham, Hubbardston, Phillipston, Rutland and Westminster.

Assessing comments made at last week's two-hour hearing in the auditorium at Quabbin Regional High School, Pula said he was generally pleased.

"We may not agree with everything that was said, but there was a definite change since last year's public access workshop. Many more people this year prefaced their remarks with something to the effect of 'I know the <MDC> is responsible for providing clean water to Boston, but ...,' " Pula said.

"PRESUMPTION OF OPENNESS"

Some like Jassy Bratko of Hubbardston argued for unrestricted use of the watershed.

A horse owner, Bratko called for the <MDC> to extend the same "presumption of openness" enjoyed by hunters to horsemen. Presumption of openness in the case of hunters means that unless state-owned land is designated otherwise, it is open to hunting.

Pula said while that level of access was unrealistic, more miles of horse trails would be made available as bridges were built to provide stream crossing points.

"We have applications in right now for two wooden bridges with the state Wood and Technology Center," Pula said.

He said the first bridge would span the stream crossing on Rice Road and the other would be on Twin Hills Road.

Nancy Hubbard of Hubbardston, the first speaker at the hearing, called upon <MDC> to keep in mind that the Ware River Act of 1926 displaced homes and businesses and peoples' lives to create a watershed to provide clean water.

"It seems to me that that is just what the watershed is doing, providing clean water for the Ware River. I think the <MDC> has to keep in mind the integrity of the water supply first and foremost when it considers any public use," Hubbard said.

"OVERUSE OF RESOURCE"

"Any activity that has a negative impact on the water supply should be prohibited," she said.

Alexandra Dawson, a member of the Water Supply Citizens Advisory Committee, which advises both the <MDC> and the Massachusetts Water Resources Authority, said the <MDC> plan acknowledged the increased demand for recreational resources.

Dawson said the Water Supply Citizens Advisory Committee recognizes the need for compromise, but said the plan is "right on the edge of overuse of the resource."

In his introduction, Pula said that the <MDC>'s primary responsibility for the land and water it owns is to see that 2.5 million people in Massachusetts have clean water to drink.

The Ware River watershed has less stringent regulations than either the Quabbin or Wachusett watersheds, because water from the river is diverted from the Ware River to Quabbin or Wachusett only as needed to bolster supply.

Public use of the Quabbin and Wachusett watershed land ranges from highly regulated to none at all, based on water quality protection and other environmental issues.

According to Pula, written comments regarding proposed changes in use of the Ware River watershed will be accepted until Dec. 1 at the Division of Watershed Management office at Quabbin Reservoir in Belchertown.

Pula said the new regulations are subject to review by David B. Balfour, <MDC> Commissioner, and require the stamp of approval of Robert A. Durand, secretary of the Executive Office of Environmental Affairs

Current regulations have been in place since an access plan was approved for the Quabbin and Ware River watersheds in 1998.

To put access into perspective, Pula said, "For people on foot - hiking, bird watching, fishing, hunting and skiing - all but the 10 acres around Shaft 8 is open to the public."

Pula said one area of conflict that remains an unresolved issue is the use of Long Pond in Rutland.

"We've got a conflict between the power boaters and the fishermen. The members of the Long Pond Boaters Association went to the Ware River Watershed Advisory Committee and made a pitch for an extended season, extended hours, and a change in the permitting system," Pula said.

"I'm really not sure at this point how we'll resolve this access issue," he said.

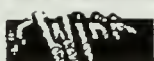
NAME: METROPOLITAN DISTRICT COMMISSION; WARE RIVER

EDITION: RT. 9 WEST; SOUTH COUNTY; RT. 9 EAST

REPRINTED WITH PERMISSION FROM THE WORCESTER TELEGRAM AND GAZETTE

Tango! - Worcester Telegram & Gazette Online ...

Page 1 of 6



News from the
Associated
Press
Weather
Personals
Lottery

Classifieds

All ads
Employment
Merchandise
Real Estate -
Rent
Real Estate -
Sale
Transportation

Going Out

Movie Listings
Theater
Clubs
Events Calendar
Restaurants
Dining Reviews

T&G News

World/Regional
Business
Sports
Features
Court News
Obituaries

Opinion

Editorials

Columnists

Williamson
Dempsey

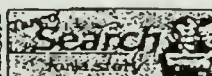
Internet Essentials

Net101

Sick of studying?



Tango!
News



Telegram & Gazette Online

Watershed limits rapped

Recreation enthusiasts air views

Friday, September 25, 1998

By Bradford L. Miner
Telegram & Gazette Staff

B1

Watershed limits rapped at forum

BARRE-- If the majority of people attending a public access workshop on the Ware River watershed had their way, the 1998 Public Access Plan would clearly be "a horse of a different color."

Outspoken equestrians were among the close to 200 area residents, some from as far as Clinton, Fitchburg and Shutesbury, attending the Metropolitan District Commission's workshop at Quabbin Regional Middle/High School last

Local News

- [Worcester](#)
- [Eastern Worcester County](#)
- [Western Worcester County](#)
- [Northern Worcester County](#)
- [Southern Worcester County](#)
- [Blackstone Valley](#)

Special Sections

- [New England Business Expo](#)
Sept. 23 - 24
- [Fall bus schedules](#)
- [A Year Without Diana](#)
- [Executive Pay](#)
Local CEOs compared
- [Golf Course Review](#)
- [Summerbook](#)
- [UMass/Memorial Merger](#)
- [Page One Archives](#)
- [Photo Gallery](#)
Photos from the Telegram & Gazette

Friday, September 25, 1998

:38 AM

Tango! - Worcester Telegram & Gazette Online ...

Page 2 of 6

[Internet Access](#)[Hot Links](#)[Marketspace](#)[Our Towns](#)[City Guides](#)[Reaching Us](#)[E-mail](#)[Map](#)[Directions](#)[FAQs](#)

night on just what activities should be allowed within the 25,000-acre Ware River watershed.

The watershed encompasses land in the towns of Phillipston, Templeton, Hubbardston, Barre, Princeton, Rutland and Oakham and is important to the MDC in that as recently as the spring of this year 2.3 billion gallons of water were diverted through the Shaft 8 Intake Works on Route 122 to Quabbin Reservoir to serve 2.5 million users.

From Quabbin, the water flows through an aqueduct carved from bedrock some 600 feet below the Ware River to Wachusett Reservoir and through a distribution system to 47 cities and towns in Eastern Massachusetts.

MDC and Massachusetts Water Resources Authority officials set the background for the workshop, outlining what had been allowed in the public access plan put in place a decade ago.

They were also right on target when they identified "horseback riding trails" as a "hot topic."

Additionally, there were pleas from snowmobilers and boaters to at least maintain the level of use allowed in the previous plan, which dates to 1988.

Many of the 30 or so people who addressed the crowd were openly critical of the MDC and

Friday, September 25, 1998

11:38 AM

Massachusetts Water Resources Authority for taking away or restricting use of land in watershed communities for the benefit of water users in the city of Boston, without taking into account the needs of area individuals who routinely look to the watershed as an area for active and passive recreation.

William E. Pula, Quabbin Reservoir superintendent, and John Gregoire of the MWRA, both spoke of the significance of the federal Safe Drinking Water Act in maintaining adequate control over use of the watershed.

Pula said Quabbin is just one of the major metropolitan water supplies yet to be subject to filtration, but that could soon change due to Environmental Protection Agency concerns with removing two water-borne pathogens -- giardia and cryptosporidium, from public water supplies.

The two one-celled protozoa are carried by many mammals, including dogs, beaver and deer.

The MDC and MWRA's stated goals are to provide clean drinking water while striking a balance between water quality protection and recreational use.

Some speakers claimed that unlike other state agencies like the Department of Environmental

Tango! - Worcester Telegram & Gazette Online ...

Page 4 of 6

Management, which allowed multiple uses and restricted only those which were deemed harmful to state forests and parks, the MDC had started from a point of "a bias against any use" and had made concessions from there.

Speakers representing a variety of organizations -- from local snowmobile clubs to statewide groups like the Bay State Trail Riders Association -- argued for responsible use of a larger portion of the watershed, instead of being restricted to specific areas and trails designated on a series of six colored maps of the watershed which depicted specific uses.

Paul Lyons, a former MDC employee now representing the Massachusetts Watershed Initiative, made a pitch for habitat protection for certain species of wildlife and noted that there had to be a balance among competing uses of the same tract of land.

Eileen Simonson of the Water Supply Citizens Advisory Committee told the group that they should be wary of asking for any level of recreational use which would eventually be "the straw that breaks the camel's back" and called for both "constraint" and "restraint" from the recreation enthusiasts.

Several speakers were critical of the "payments in lieu of taxes" or

Friday, September 25, 1998

1:38 AM



PILOT money which the MDC and MWRA paid the communities for the land it owned.

"You guys own 40 percent of Hubbardston and all that you're giving us is \$118,000," a Hubbardston resident chided.

"Why should we be punished for the benefit of the people of Boston?" he asked.

Maureen M. Marshall, superintendent of the Quabbin Regional School District and an accomplished equestrian, said she could understand the need for environmental protection of the watershed, but encouraged the MDC and MWRA to allow groups with an active interest in the watershed to demonstrate responsible use.

"Clean land, clean water, and responsible recreational use are not mutually exclusive," Marshall said, calling upon the agencies to meet with the specific groups and hold each to a commitment of responsibility.

Clif Read, a spokesman for the MDC at Quabbin, said the discussion of the public access issues will assist the Division of Watershed Management in establishing priorities and resolving any conflicts when the agency updates the policies in the 1988 public access plan which currently

Tango! - Worcester Telegram & Gazette Online ...

Page 6 of 6

govern use of the watershed land.

Those with additional comments were encouraged to write to Pula at the MDC Administrative Building at Quabbin Reservoir.

The process of developing an updated Public Access Plan calls for additional periods of public comment and review by the state's environmental agencies before a final version is set in place.

© 1998 Worcester Telegram & Gazette

[Home](#) | [News](#) | [Sports](#) | [Business](#) | [Weather](#)
[Features](#) | [Classifieds](#)

[Contact us](#)

©1998 Worcester Telegram & Gazette

Have the Telegram & Gazette delivered to your home or office!
Call 1-800-922-8200

Friday, September 25, 1998

11:38 AM

Reprinted with permission by the Worcester Telegram and Gazette

Groups will discuss ways to balance public access, watershed protection

By Bradford L. Miner
TELEGRAM & GAZETTE STAFF

BARRE—A mecca for outdoor enthusiasts and a sometime source of drinking water, the Ware River, as it trickles under Route 122 at the Oakham town line, appears to be anything but a river these days.

The level of the river was drawn down because of routine maintenance of the Shaft 8 Intake at Coldbrook, which diverts water to the Wachusett and Quabbin reservoirs, and the recent rainfall has been insufficient to replenish the river.

The river and the 21,000 acres that make up the Ware River watershed, managed by the Metropolitan District Commission, will be the focus of a workshop next week looking at updating a 10-year-old public access plan.

The Ware River Watershed is sandwiched between the Quabbin and Wachusett watersheds, which protect drinking water for 2.5 million people in eastern Massachusetts. The Ware watershed protects a backup source of water which has not been needed in recent years, according to Massachusetts Water Resources Authority officials, and thus there is greater latitude in permitted activities.

"I don't see this as an attempt to make public access any more restrictive. I think the idea is to clarify and modify existing policies and regulations," said Donald Rich of High Plains Road. Rich is president of the Upper Ware River Watershed Association and a member of the Ware River Watershed Advisory Committee.

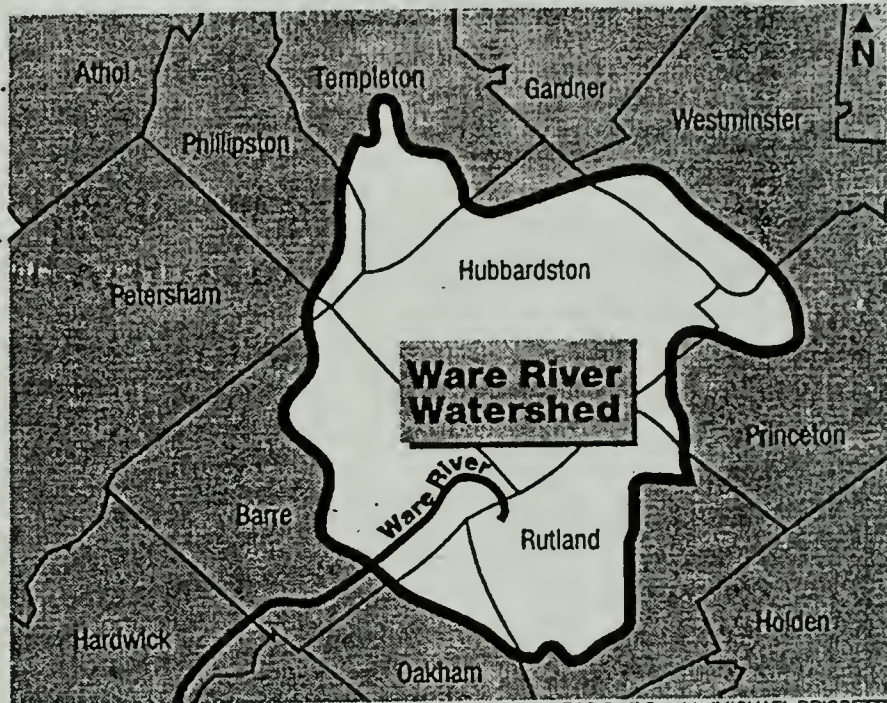
The workshop will be held at 7 p.m. Thursday at Quabbin Regional Middle/High School on South Street in Barre.

The Ware watershed encompasses land in Phillipston, Templeton, Hubbardston, Barre, Princeton, Rutland and Oakham.

Rich said the advisory committee has had four meetings and has heard pitches from horse lovers and snowmobile riders for expanded access to the watershed.

BRIDGE WANTED

Rich said snowmobile riders want to put a bridge across the river at Coldbrook for access to the railbed.



T & G Staff Graphic/MICHAEL BRISSETTE

"I don't think the MDC is too keen about the idea of increasing access to the watershed for horseback riding, because first and foremost this is a watershed for a public water supply and drinking water quality is the priority," Rich said.

Cliff Read, a spokesman for the Metropolitan District Commission at Quabbin, said management of the Ware River Watershed differs from the Quabbin and Wachusett watersheds because water from the Ware River is diverted at Shaft 8 to Quabbin or Wachusett on an "as needed basis" and that has not been necessary in recent years.

The workshop is sponsored by the commission's Division of Watershed Management and will include presentations by the Metropolitan District Commission's watershed management staff, the Massachusetts Water Resources Authority staff and a representative from the Ware River Watershed Advisory Committee.

HELP FOR STATE

The discussion of the public access issues, Read said, will assist the Division of Watershed Management in establishing priorities and resolving conflicts when the agency updates the policies in the 1988 public access plan, which currently

governs use of the watershed land.

Read said both snowmobile and horseback riding are currently allowed in limited, designated areas.

The workshop will look at the possibility of redesignating some of the areas open to use by horses, snowmobiles and mountain bikes.

Read said the speakers will include William Pula, superintendent of Quabbin Reservoir; Steve Drawbridge, an Metropolitan District Commission forester who works within the Ware River watershed; John Gregoire of the Metropolitan Water Resources Authority; Dick Williams, chairman of the advisory committee, and Lisa Gustavsen, regional planner.

**• SOCIAL SECURITY
DISABILITY
INITIAL CLAIMS &
APPEALS
• PERSONAL INJURIES
• ACCIDENTS**

No Fee Unless you Win

ALIDA S. HOWARD
ATTORNEY AT LAW

51 Union Street, Suite 101, Worcester, MA
508-753-3301 toll free 1-800-753-2024

